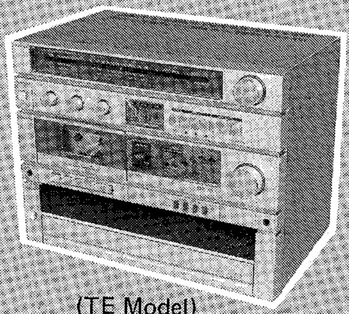
126

TOSHIBA
STEREO SOUND SYSTEM
SL-10/SL-10R


(TE Model)

(TU Model)

SPECIFICATIONS

■ General

Power supply:	220V ~ 50 Hz (for European countries except U.K.) 240V ~ 50 Hz (for Australia & United Kingdom)
Power consumption:	95W
Dimensions (W x H x D):	420 x 337 x 250 mm
Weight:	9.3 kg

■ Amplifier

Rated continuous power:	15W + 15W, 5% THD at 8 ohms (1 kHz, both channels driven)
Music power:	25W + 25W, 5% THD at 8 ohms (1 kHz, both channels driven)
Frequency response:	20 Hz – 30 kHz $^{+1}_{-2}$ dB
Signal to noise ratio:	70 dB (PHONO A Network)
Headphones:	Recommended impedance of headphones is more than 8 ohms
Speaker impedance:	8 – 16 ohms

■ Tuner

Frequency:	FM: 88 – 108 MHz MW: 525 – 1605 kHz LW: 145 – 355 kHz

FM Band

Aerial:	External aerial (75 ohm)
Usable sensitivity:	Mono: 1.5 μV (S/N = 26 dB 40 kHz dev.)
Signal to noise ratio:	Mono: 70 dB (IHF A weighted)
Distortion:	0.5% at 1 kHz (STEREO)
AM suppression:	45 dB
Separation:	30 dB at 1 kHz

AM Band

Aerial:	Loop Antenna
Usable sensitivity:	500 μV/m (MW) 900 μV/m (LW)

■ Cassette Recorder

Track system:	4 track, 2 channel (stereophonic)
Tape speed:	4.75 cm/sec.
Recording and Erasing system:	AC Bias (85 kHz), AC Erase
Heads:	(Record/Playback) Permalloy head, (Erase) Ferrite head
Signal to noise ratio:	Chrome tape 50 dB
Frequency response: (−20 dB input)	(Metal tape) 40 Hz – 16 kHz (Chrome tape) 40 Hz – 15 kHz (Normal tape) 40 Hz – 14 kHz
Wow & Flutter:	0.15% (WTD RMS)

■ Turntable

Drive system:	Belt drive
Motor:	DC motor, Electric governor
Turntable platter:	22 cm
Speed:	Two speed 33-1/3 & 45 rpm
Wow & flutter:	Less than 0.15% (WRMS)
Signal to noise ratio:	More than 55 dB (DIN B)
Cartridge:	VM type
Stylus:	N-293DY

Specifications subject to change without notice.

SL-10-TE, TU: SL-10R-TU

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2. DISASSEMBLY INSTRUCTIONS

JACK PLATE REMOVAL

1. Remove 17 screws Ⓐ securing the jack board.

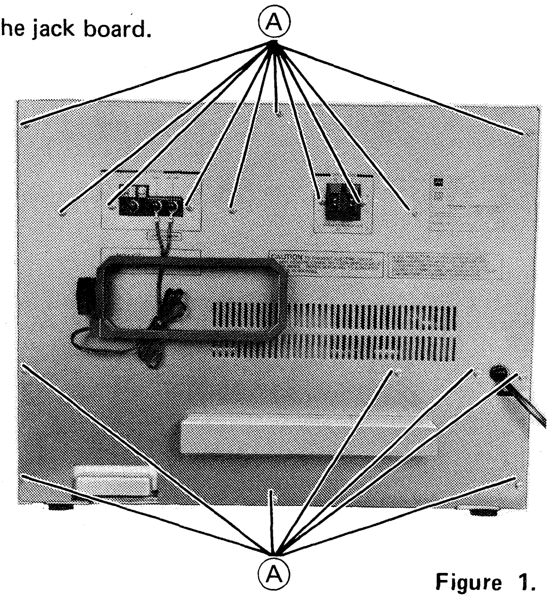


Figure 1.

TOP COVER REMOVAL

1. Remove the jack plate.
2. Remove four screws Ⓑ, Ⓒ to detach the top cover.

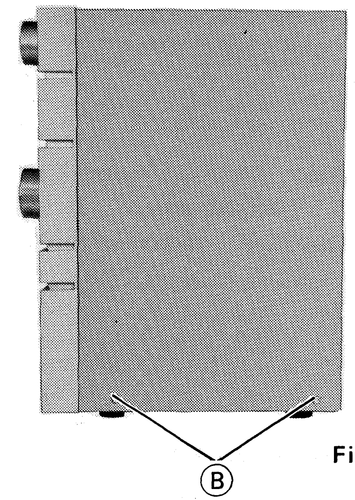


Figure 2.

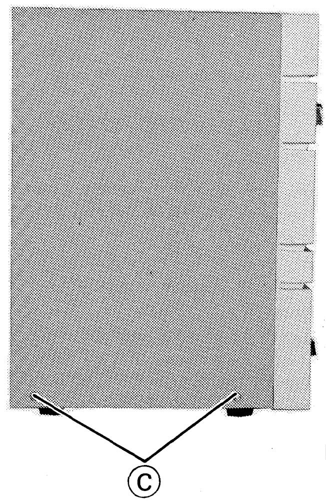


Figure 3.

MECHANISM ASSEMBLY REMOVAL

1. Remove five screws Ⓓ, Ⓔ securing mechanism assembly.

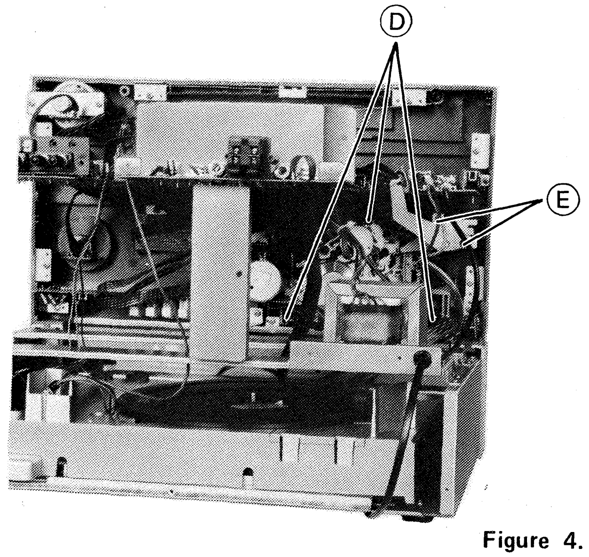


Figure 4.

TUNER, AMPLIFIER ASSEMBLY AND PLAYER ASSEMBLY REMOVAL

1. Remove 6 screws Ⓕ and pull the tuner amplifier on the player in the arrow direction to detach the player assembly. (Be sure to disconnect two connectors.)

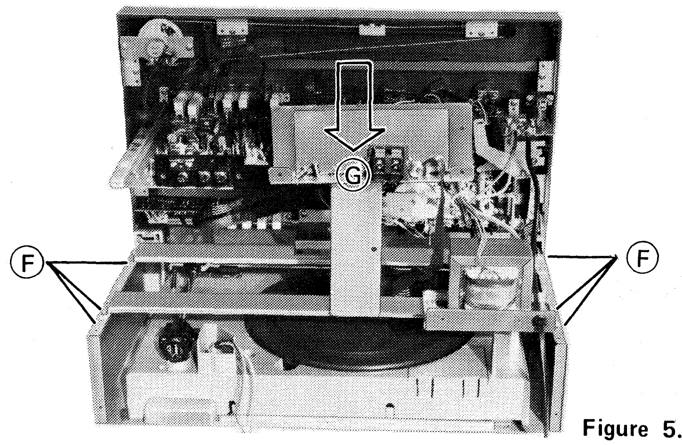


Figure 5.

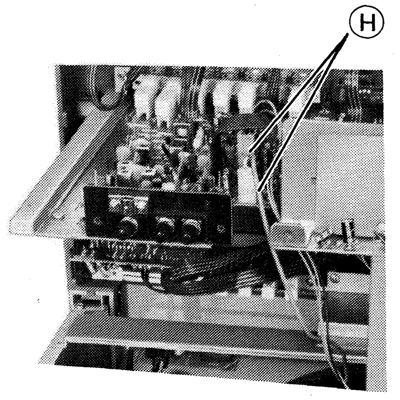


Figure 6.

Tuner amplifier and player removal

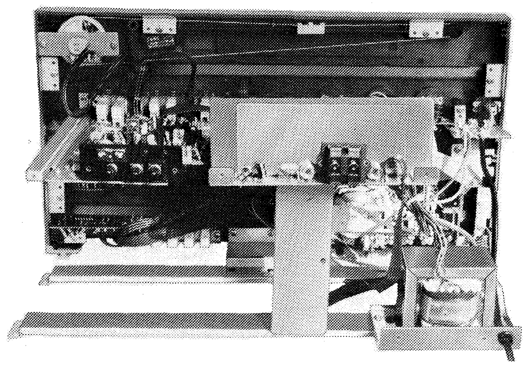


Figure 7.

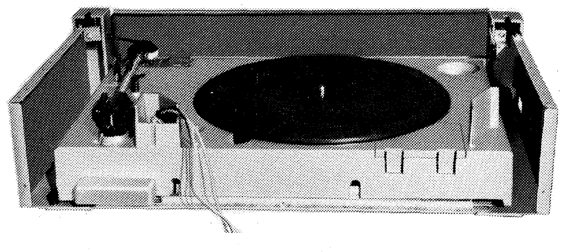


Figure 8.

MONITOR COVER REMOVAL

1. Detach the turntable.
2. Push and raise the motor cover at the back of the player.

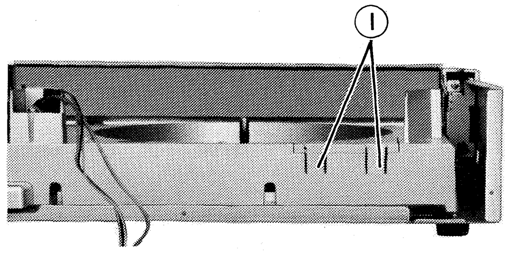


Figure 9.

PLAYER REMOVAL

1. Detach the turntable.
2. Remove four screws Ⓙ to detach the player.

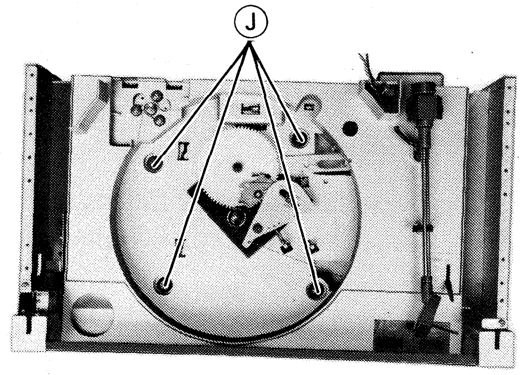


Figure 10.

NOTE: Two screws at the bottom board fix the unit for transportation. When operating, remove these screws.

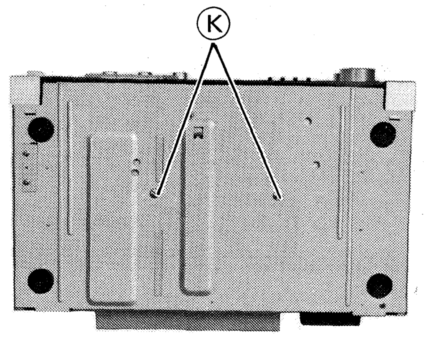
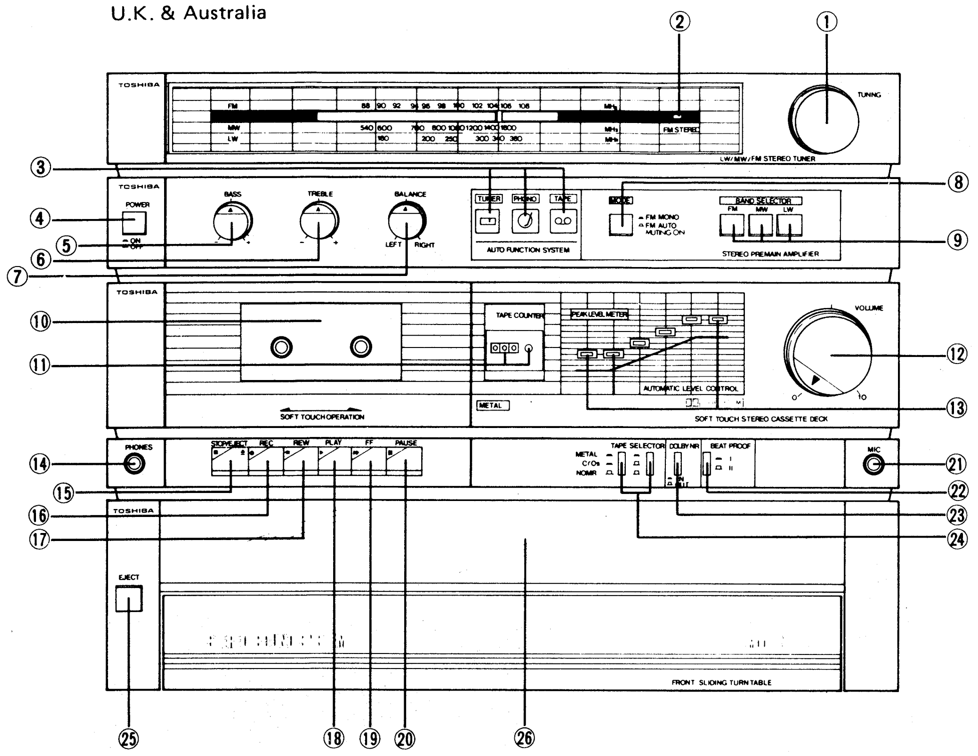


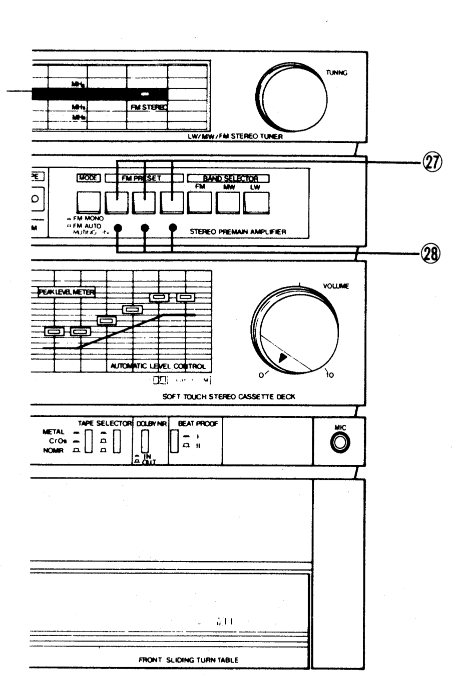
Figure 11.

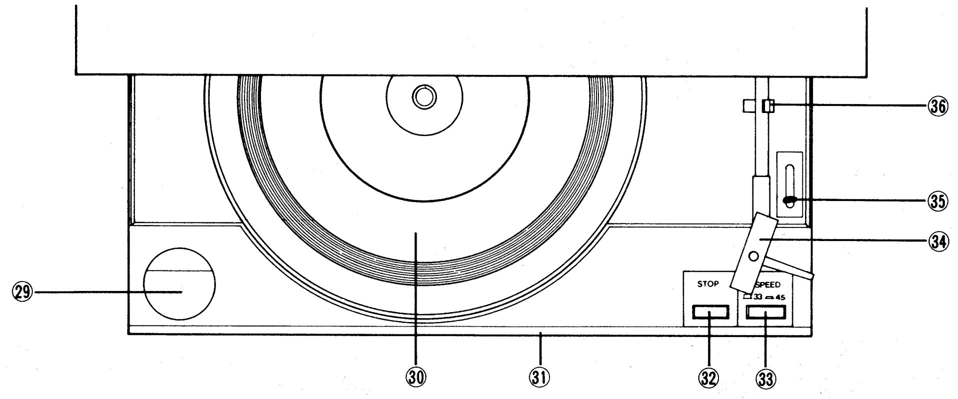
1. OPERATING CONTROLS

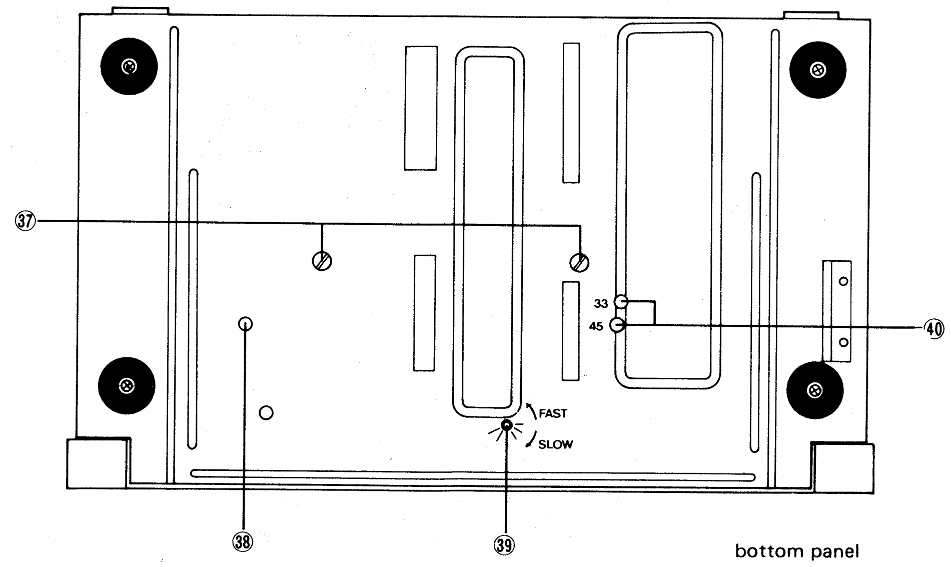
U.K. & Australia


②
①
TOSHIBA
TUNING
LW/MW/FM STEREO TUNER
FM STEREO
③
④
⑤
⑥
⑦
POWER
BASS
TREBLE
BALANCE
LEFT
RIGHT
TUNER
PHONO
TAPE
AUTO FUNCTION SYSTEM
MODE
FM MONO
FM AUTO MUTING ON
BAND SELECTOR
FM
MW
LW
STEREO PREMAIN AMPLIFIER
⑧
⑨
⑩
⑪
TAPE COUNTER
PEAK LEVEL METER
METAL
AUTOMATIC LEVEL CONTROL
VOLUME
SOFT TOUCH OPERATION
SOFT TOUCH STEREO CASSETTE DECK
⑫
⑬
⑭
PHONES
STOP/EJECT
REC
REW
PLAY
FF
PAUSE
TAPE SELECTOR
DOLBY NR
BEAT PROOF
METAL
CrO₂
NORMAL
MIC
⑮
⑯
⑰
㉑
㉒
㉓
㉔
EJECT
FRONT SLIDING TURNTABLE
㉕
⑱
⑲
⑳
㉖

European Countries except U.K.


TUNING
LW/MW/FM STEREO TUNER
FM STEREO
MODE
FM PRESET
BAND SELECTOR
FM
MW
LW
FM MONO
FM AUTO
STEREO PREMAIN AMPLIFIER
㉗
㉘
PEAK LEVEL METER
AUTOMATIC LEVEL CONTROL
VOLUME
SOFT TOUCH STEREO CASSETTE DECK
TAPE SELECTOR
DOLBY NR
BEAT PROOF
METAL
CrO₂
NORMAL
MIC
FRONT SLIDING TURNTABLE


㊱
㉟
㉞
㉙
STOP
SPEED
33
45
㉚
㉛
㉜
㉝


㊲
33
45
㊵
FAST
SLOW
㊳
㊴

bottom panel

① **Tuning knob**
Use this knob to tune in a radio broadcast.

② **FM stereo indicator**
This lights up when an FM stereo broadcast is received.

③ **Function indicators**
- TUNER: Lights when the tuner is being heard.
- PHONO: Lights when the turntable is being heard.
- TAPE: Lights when the tape deck is being heard.

④ **Power button**
Depress this button once to turn the power on (▭) and once more to turn the power off again (⊓).
Note: Turn the volume knob to the MIN position before turning the power on.

⑤ **Bass knob**
Turn clockwise to emphasize the low range and counterclockwise to attenuate the high range.

⑥ **Treble knob**
Turn clockwise to emphasize the high range and counterclockwise to attenuate the high range.

⑦ **Balance knob**
Turn to the left to shift shound balance to the left and to the right for the opposite effect.

⑧ **Mode button**
In the FM AUTO/MUTING ON position, the muting circuitry suppresses inter-station noise, and either stereo or mono FM reception is possible. In the FM MONO position, muting does not function and FM stereo broadcasts are heard in monaural form. Use this position to receive weak stations that the muting circuitry might suppress.

⑨ **Band selector**
FM: For FM radio broadcasts
MW: For MW radio broadcasts
LW: For LW radio broadcasts

The function is automatically switched to the tuner when one of these selectors is pressed and the tuner indicator lights.

⑩ **Cassette door**

⑪ **Tape counter/Reset button**
Use this to find specific programmes recorded on your tapes by setting it to 000 at the beginning of recording operations and writing the location of each tune on the tape holder. Depress the button to return the tape counter to 000.

⑫ **Volume knob**
Turn clockwise to increase volume and counterclockwise to decrease volume.

⑬ **Peak level meter**

⑭ **Headphone jack**
Plug headphones into this jack for private listening.

⑮ **■/▲ Stop/Eject button**
Press this button to stop tape transport during any of the tape transport modes. Press this button again to open the cassette door after the tape has been stopped.

⑯ **● Record button**
Press this button to begin recording. This set is equipped with a "One touch recording system."

⑰ **◀◀ Rewind button**
Press this button to wind the tape rapidly backward.

⑱ **▶ Play button**
Press this button to play back a cassette.

⑲ **▶▶ Fast Forward button**
Press this button to wind the tape rapidly forward.

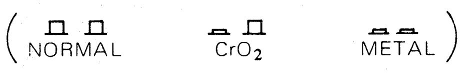
⑳ **❚❚ Pause button**
Press this button to temporarily stop tape transport during the play and record modes. Press again to continue playback or recording.

㉑ **Mic jack**
This jack is for cassette tape recording and mic mixing operations.

㉒ **Beat proof button**
Depress this if beat interference is heard on recordings made from MW and LW broadcasts.

㉓ **Dolby* NR button**
Depress this button to record and play back Dolby encoded tapes.

㉔ **Tape selector buttons (Bias/Equalization)**
Set these buttons to the correct positions for the type of tape used


NORMAL
CrO₂
METAL

㉕ **Eject button**
Press this button to open the turntable door and slide out the turntable unit.

㉖ **Turntable door**

㉗ **FM preset buttons (1-3)**
Use these buttons to recall and FM station from the memory.

㉘ **FM preset tuning control**
Adjust this with the accessory mini-screwdriver to set the frequencies for the FM preset tuning function.
Note: The FM preset buttons and FM preset tuning control are on models for all European countries except those for the United Kingdom.

㉙ **EP adopter holder** ㉚ **Turntable platter** ㉛ **Turntable case**
㉜ **Stop button** ㉝ **Speed selector** ㉞ **Tonearm**
㉟ **Cueing lever (arm lifter)** ㊱ **Arm rest and arm rest lock**

Botom Panel

㊲ **Transit screws**

㊳ **Pickup returning point adjustment knob**

㊴ **Turntable case sliding speed adjustment knob**

㊵ **Disk speed adjustment knob**

Note: Adjustments ㊳ and ㊵ should only be performed by your Toshiba dealer.

* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

3. BLOCK DIAGRAM

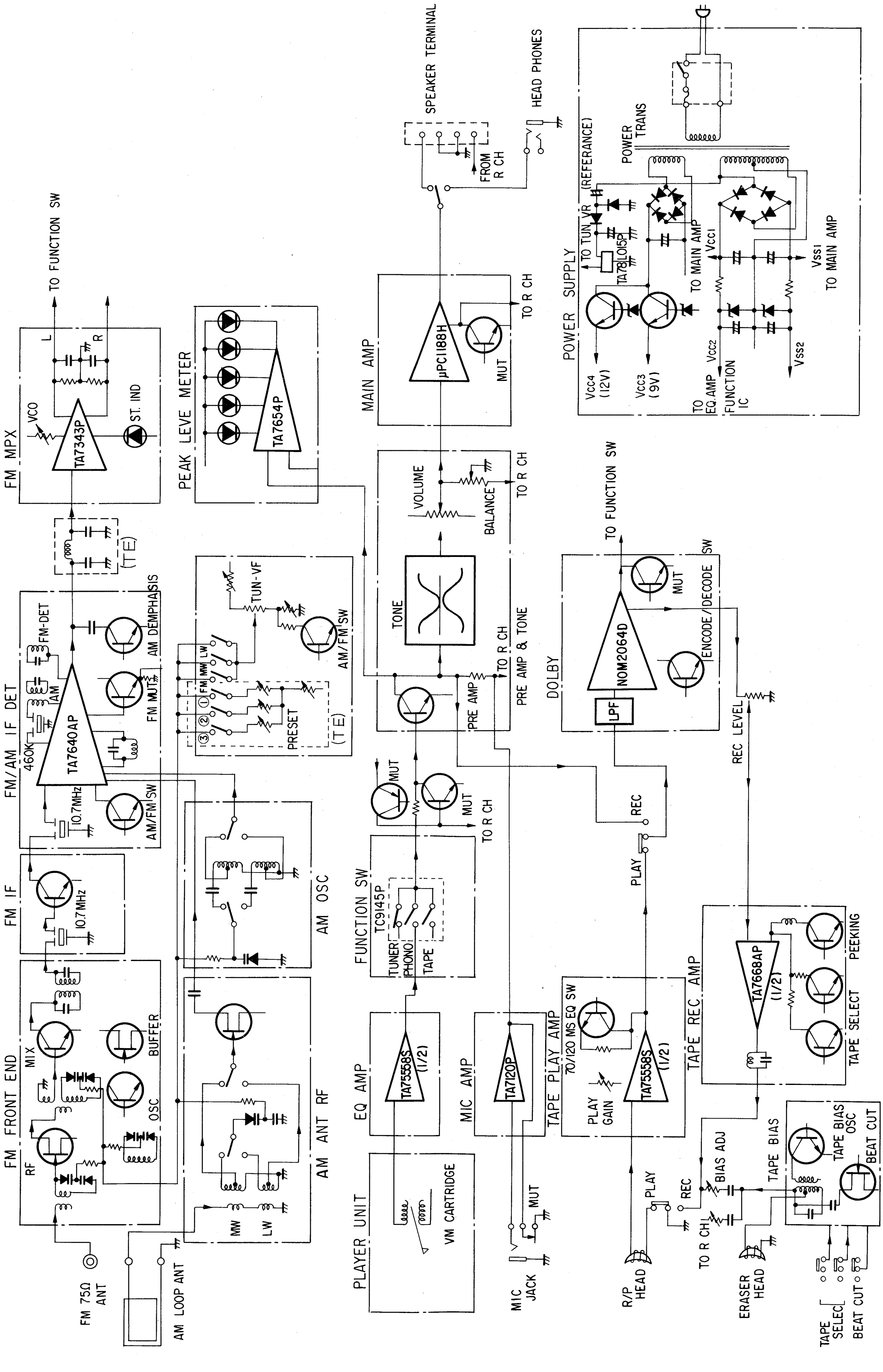

FM FRONT END
RF
MIX
BUFFER
OSC
FM 75Ω ANT
FM IF
10.7MHz
FM/AM IF DET
TA7640AP
460K
FM-DET
AM
AM DEMPHASIS
FM MUT
AM/FM SW
(TE)
FM MPX
TA7343P
VCO
ST. IND
L
R
TO FUNCTION SW
AM ANT RF
MW
LW
AM LOOP ANT
AM OSC
PRESET
TUN-VF
AM/FM SW
FM
MW
LW
PEAK LEVE METER
TA7654P
PLAYER UNIT
VM CARTRIDGE
EQ AMP
TA7555S (1/2)
FUNCTION SW
TC9145P
TUNER
PHONO
TAPE
MUT
TO R CH
PRE AMP & TONE
PRE AMP
TONE
VOLUME
BALANCE
MAIN AMP
μPC1188H
SPEAKER TERMINAL
FROM R CH
HEAD PHONES
MIC AMP
TA7120P
MIC JACK
TAPE PLAY AMP
70/120 MS EQ SW
PLAY GAIN
TA7555S (1/2)
PLAY
REC
R/P HEAD
DOLBY
NOM2064D
LPF
ENCODE/DECODE SW
REC LEVEL
TAPE REC AMP
TA7668AP (1/2)
PEEKING
TAPE SELECT
BIAS ADJ
TAPE BIAS
TAPE BIAS OSC
BEAT CUT
ERASER HEAD
TAPE SELEC
BEAT CUT
POWER SUPPLY
POWER TRANS
(REFERANCE)
TO TUN VR
TA78L015P
TO MAIN AMP
Vcc1
Vss1
Vcc2
Vss2
Vcc4 (12V)
Vcc3 (9V)
TO EQ AMP
FUNCTION IC

Figure 12.

4. DIAL CORD RESTRINGING

1. Wind the dial cord in numerical order.
2. Insert the tuning shaft into drum and fasten with screws.
3. Set the pointer to the proper setting position with the tuning shaft rotating fully counterclockwise.
4. Apply binding agent to pointer and dial cord.

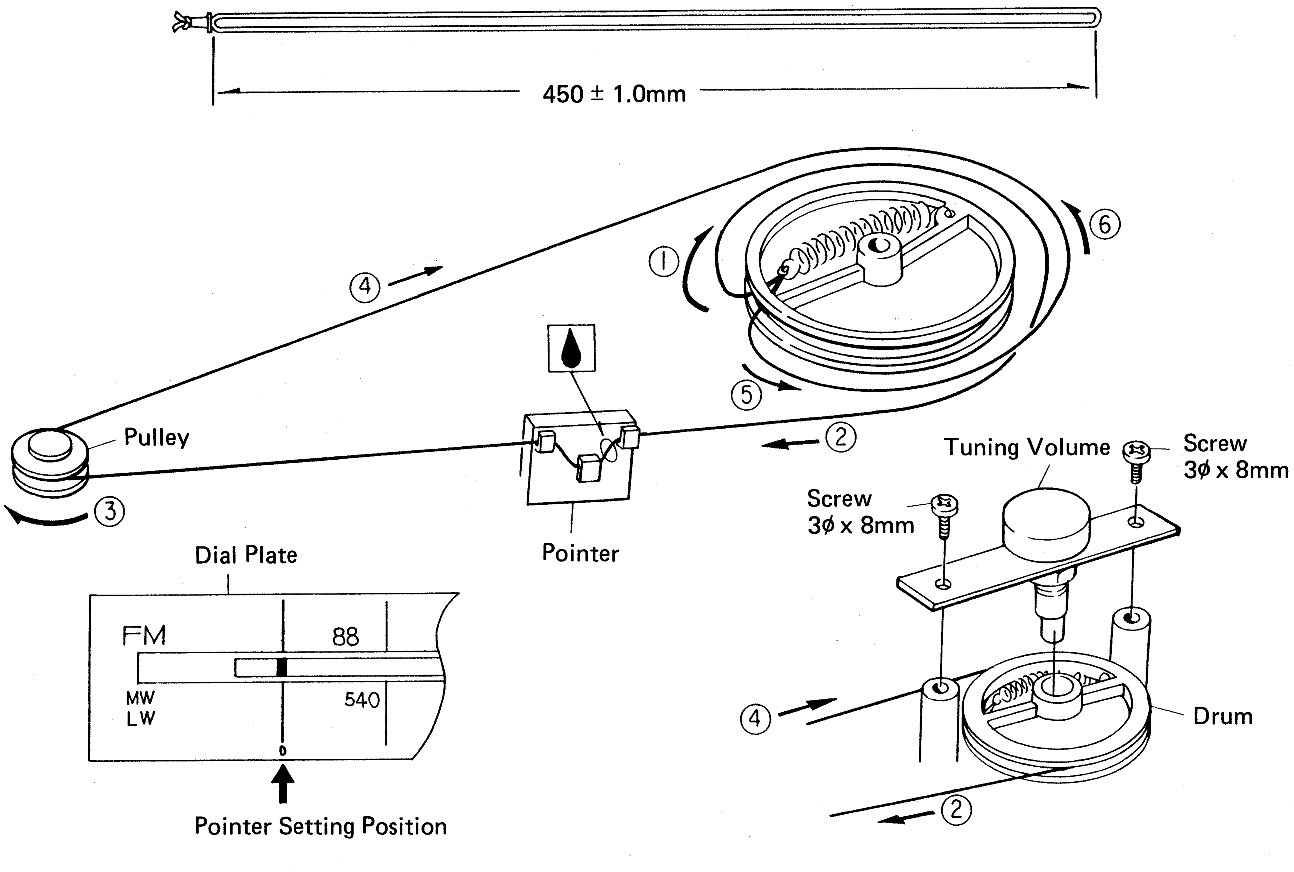

450 ± 1.0mm
④
①
⑥
⑤
Pulley
②
③
Pointer
Dial Plate
FM
88
MW
LW
540
0
Pointer Setting Position
Tuning Volume
Screw
3ϕ x 8mm
Screw
3ϕ x 8mm
④
Drum
②

Figure 13.

5. ADJUSTMENTS

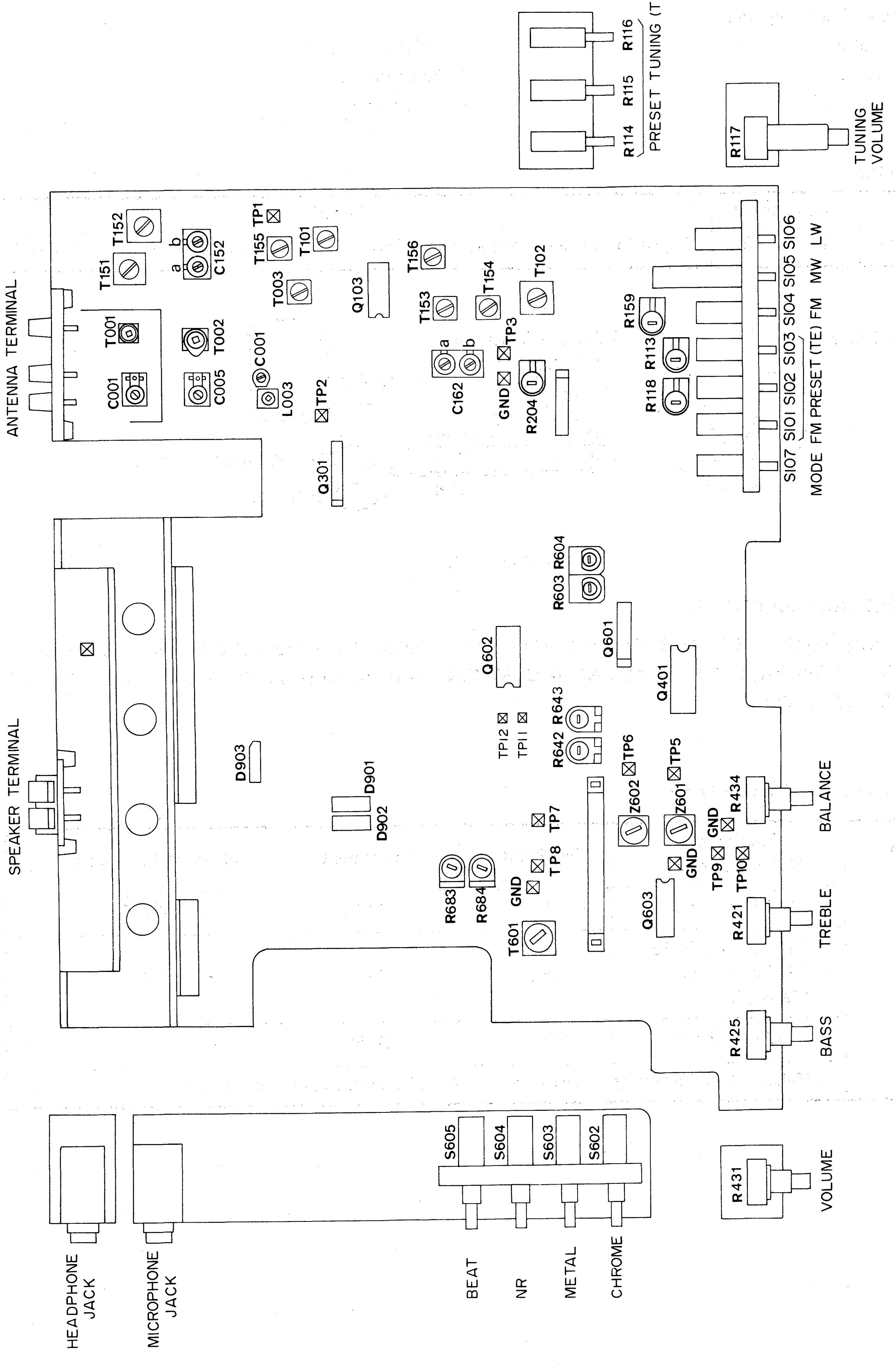

R114
R115
R116
PRESET TUNING (TE)
R117
TUNING VOLUME
ANTENNA TERMINAL
T151
T152
a
b
C152
T155
TP1
T101
T003
Q103
T156
T153
T154
T102
T001
C001
T002
C005
C001
L003
TP2
a
b
C162
GND
TP3
R204
R159
R113
R118
SIO7 SIO1 SIO2 SIO3 SIO4 SIO5 SIO6
MODE FM PRESET (TE) FM MW LW
Q301
R603 R604
Q601
Q602
Q401
SPEAKER TERMINAL
TP12
TP11
R642 R643
TP6
TP5
D903
D901
D902
TP7
Z602
Z601
GND
R434
BALANCE
TP8
GND
TP9
TP10
R683
R684
GND
T601
Q603
R421
TREBLE
R425
BASS
S605
S604
S603
S602
R431
VOLUME
HEADPHONE JACK
MICROPHONE JACK
BEAT
NR
METAL
CHROME

Figure 14.

Test equipments/Tools required

1. Signal generator
2. Sweep generator
3. Test Loop antenna
4. VTVM
5. Adjusting screwdriver
6. Adjusting bar
7. Oscilloscope

IF ADJUSTMENT

Step	Adjustment	Remarks
IF Response	T155, T156	Adjust for scope pattern with specified marker (460 kHz) as illustrated in Figure 15.

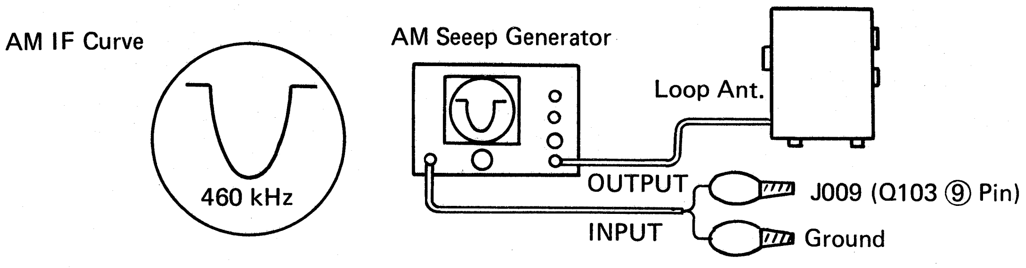


Figure 15.

TUNING VOLTAGE ADJUSTMENT

* When replacing R118, R159, R113 (TE only), R117, D001 ~ D003, D151 and D152, be sure to perform the FREQUENCY COVERAGE AND TRACKING ADJUSTMENT as described below after proceeding the TUNING VOLTAGE ADJUSTMENT.

FET Tester or Digital Voltage Tester

Band SW	Position of Volume Control	Test Point	Adjustment	Voltage at Test Point
FM	R117 Max (f max)	TP2	R118	25V
	R117, R114, R115, R116 Min. (f min.) (TE only)	TP2	R113	3V
	R117 Min (f min)	TP2	R159	3V
AM	Make certain the voltage at TP1 is set to 1V ~ 25V by the above adjustment.			

FREQUENCY COVERAGE AND TRACKING ADJUSTMENT MW (LW)

Step	Adjusting Circuit	Connection		SG Frequency	Position of Tuning Dial	Adjustment	VTVM
		Input	Output				
1	OSC (Frequency Coverage	Connect signal generator to test loop.	Connect VTVM to Output terminal.	515 kHz (142 kHz) 400 Hz 30% MOD.	Frequency minimum position (142 kHz)	T153 (T154)	Maximum
2				1650 kHz (365 kHz) 400 Hz 30% MOD.	Frequency maximum position 1650 kHz (365 kHz) signal	C-162-a (C162-b)	
Repeat steps 1 and 2.							
3	OSC (Frequency Coverage)	Connect signal generator to test loop.	Connect VTVM to Output terminal.	600 kHz (160 kHz) 400 Hz 30% MOD.	Tune to 600 kHz (160 kHz) signal		Adjust for no scale error.
4				1400 kHz (340 kHz) 400 Hz 30% MOD.	Tune to 1400 kHz (340 kHz) signal		
Repeat steps 3 and 4. If any error is present, repeat steps from 1 to 4.							
5				600 kHz (160 kHz) 400 Hz 30% MOD.	Tune to 600 kHz (160 kHz) signal	T151 (T152)	Maximum
6				1400 kHz (340 kHz) 400 Hz 30% MOD.	Tune to 1400 kHz (340 kHz) signal	C152-a (C152-b)	
Repeat steps 5 and 6.							

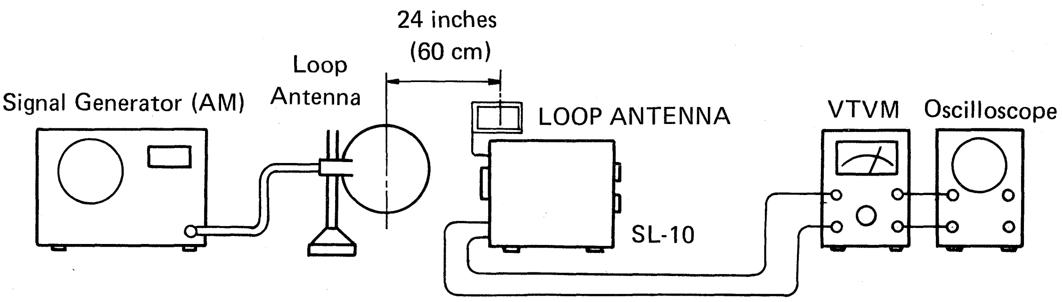


Figure 16.

FM ADJUSTMENT

Test equipments/Tools required

1. Distortion meter
2. Signal generator
3. Oscilloscope
4. VTVM
5. FM dummy antenna (300 ohms)
6. Dummy load resistor
7. Adjusting screwdriver
8. Adjusting bar

Step	Adjusting Circuit	Connection		SG Frequency	Position Tuning Dial	Adjust-ment	VTVM
		Input	Output				
1	OSC (Frequency coverage)	Connect FM signal generator to FM antenna terminal.	Connect VTVM to Output terminal	87.5 MHz	F. Min.	L003	Maximum
2				108.0 MHz	F. Max.	C011	
Repeat steps 1 and 2.							
3	RF (Tracking)	Connect FM signal generator to FM antenna terminal.	Connect VTVM to Output terminal.	88 MHz	Tune to 88 MHz signal	T001 T002	Maximum
4				108 MHz	Tune to 108 MHz signal	C001, C004 VR Trim.	
Repeat steps 3 and 4.							

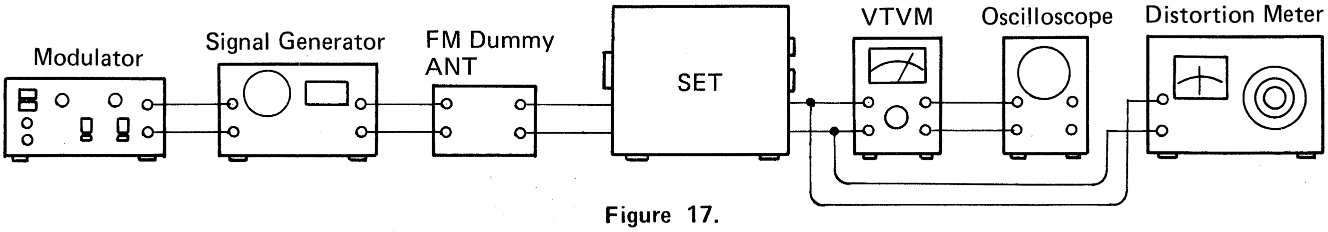

Modulator
Signal Generator
FM Dummy ANT
SET
VTVM
Oscilloscope
Distortion Meter

Figure 17.

CAUTION:

When realigning the FM Receiving Frequency, the highest end of the frequency range should not be more than 108 MHz and the lowest end of the frequency range should not be less than 87.5 MHz, in order to comply with FTZ regulations in West Germany.

FM MPX ADJUSTMENT

Test Equipments/Tools required

1. Frequency counter
2. Resistor 330K ohm

Pilot signal adjustment	Connect a frequency counter to the TP with 330K ohm Resistor, and adjust the R204 for 38 kHz reading counter with no-signal input.

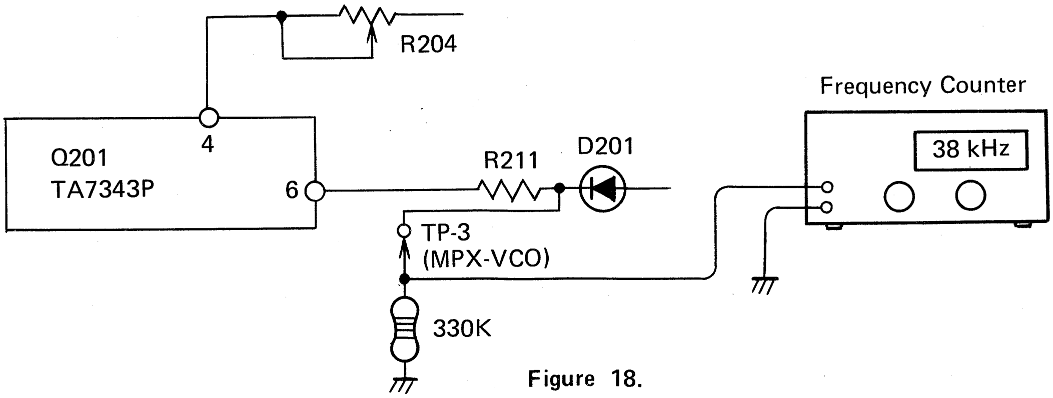

R204
Q201
TA7343P
4
6
R211
D201
TP-3
(MPX-VCO)
330K
Frequency Counter
38 kHz

Figure 18.

CASSETTE DECK ADJUSTMENT PROCEDURES

No.	Item	Reference Value	Test Tape	SW		Adjustment Point	Test Point	Input Frequency	Remarks
				TAPE	NR				
1	Head Azimuth Adjustment	Max.	MTT-114	NOR	OUT	Head Azimuth adjustment screw	TP5, TP6 (Dolby OUT)	Play mode	After adjustment apply a lock paint on the screw.
2	Playback Sensitivity Adjustment	100mV	MTT-150	NOR	OUT	R603 R604	TP5, TP6	Play mode	–
3	Bias Adjustment	5mV	AC-512	CrO_2	OUT	R684 R683	TP7, TP8	REC mode	–
4-a	Rec/Play Sensitivity Adjustment	100mV Confirmation	–	NOR	OUT	Input 285mV	TP9, TP10	400 Hz	Input: TP9, 10
4-b		100mV	AC212	NOR	OUT	R643 R644	TP5, TP6	400 Hz	Repeat adjustment to read 100mV on VTVM in Rec and Play modes.
Measurement Condition		Power Supply TE: 220V~, 50 Hz, TU 240V ~, 50 Hz ● Test Point Load Impedance: No Load							

TEST EQUIPMENTS

1. VTVM (Vacuum Tube Voltmeter)
2. Signal Generator
3. Resistance Attenuator
4. Screwdriver
5. Test Tapes:
   MTT-114 (10 kHz)
   MTT-150 (400 Hz)
   AC-212 (Normal Tape)
   AC-512 (Chrome Tape)

RECORD/PLAYBACK HEAD ADJUSTMENT

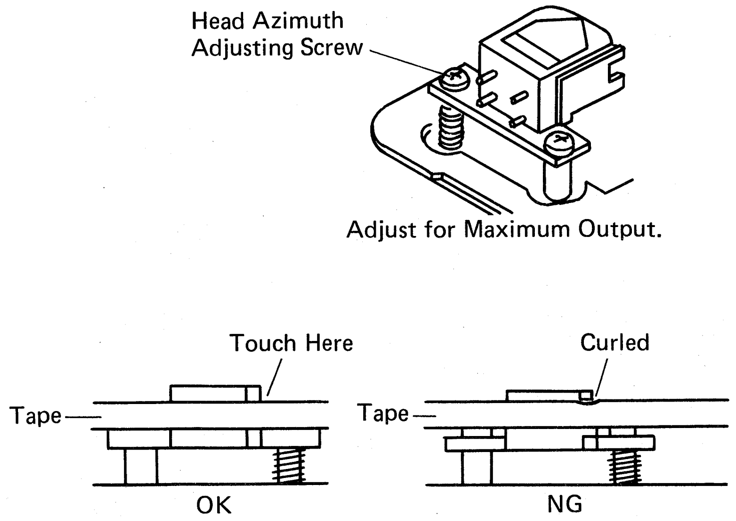

Head Azimuth
Adjusting Screw
Adjust for Maximum Output.
Touch Here
Curled
Tape
Tape
OK
NG

Figure 19.

ERASE HEAD HEIGHT ADJUSTMENT

1. Temporarily mount the erase head so that it will be even by eye measurement.
2. Set in PLAY position with setting a mirror cassette tape, MC-09C.
3. Adjust the height adjusting screw so that the upper edge of the tape will touch at the upper tape guide of the erase head.
4. Confirm whether the upper edge of the tape is not Curled.
5. Apply a lock point on the adjusting screw.

P.S. When the mirror cassette is not available, please remodel a normal tape, type C-90 as shown below.

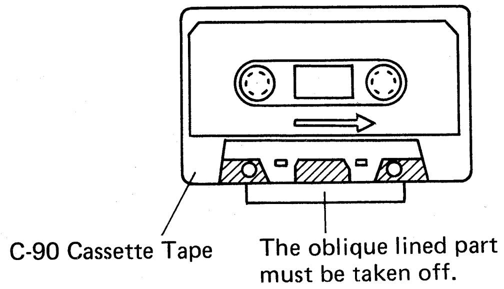

C-90 Cassette Tape
The oblique lined part
must be taken off.

Figure 20.

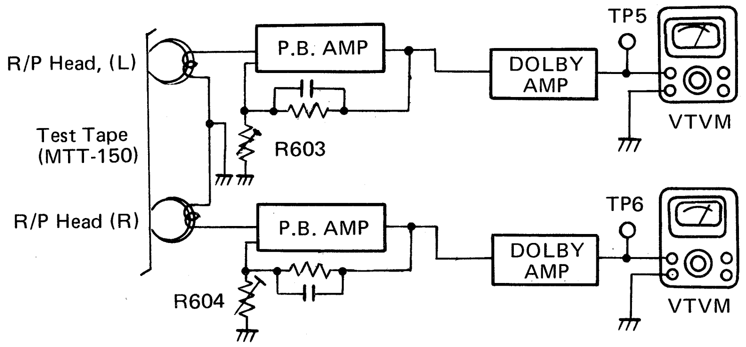

(Head Azimuth Adjustment)
(Playback Sensitivity Adjustment)
R/P Head, (L)
Test Tape
(MTT-150)
R/P Head (R)
P.B. AMP
P.B. AMP
R603
R604
DOLBY AMP
DOLBY AMP
TP5
TP6
VTVM
VTVM

Figure 21.

(Bias Adjustment)

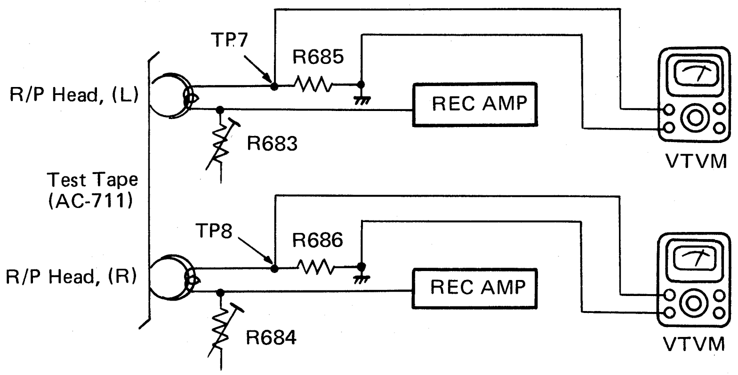

R/P Head, (L)
Test Tape
(AC-711)
R/P Head, (R)
TP7
TP8
R685
R686
R683
R684
REC AMP
REC AMP
VTVM
VTVM

Figure 22.

(REC/PLAY Sensitivity Adjustment)

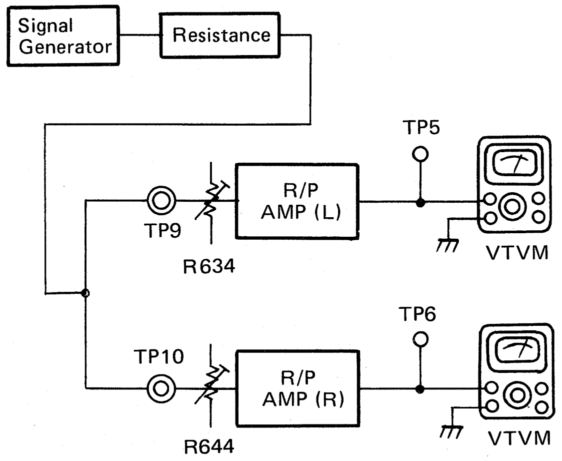
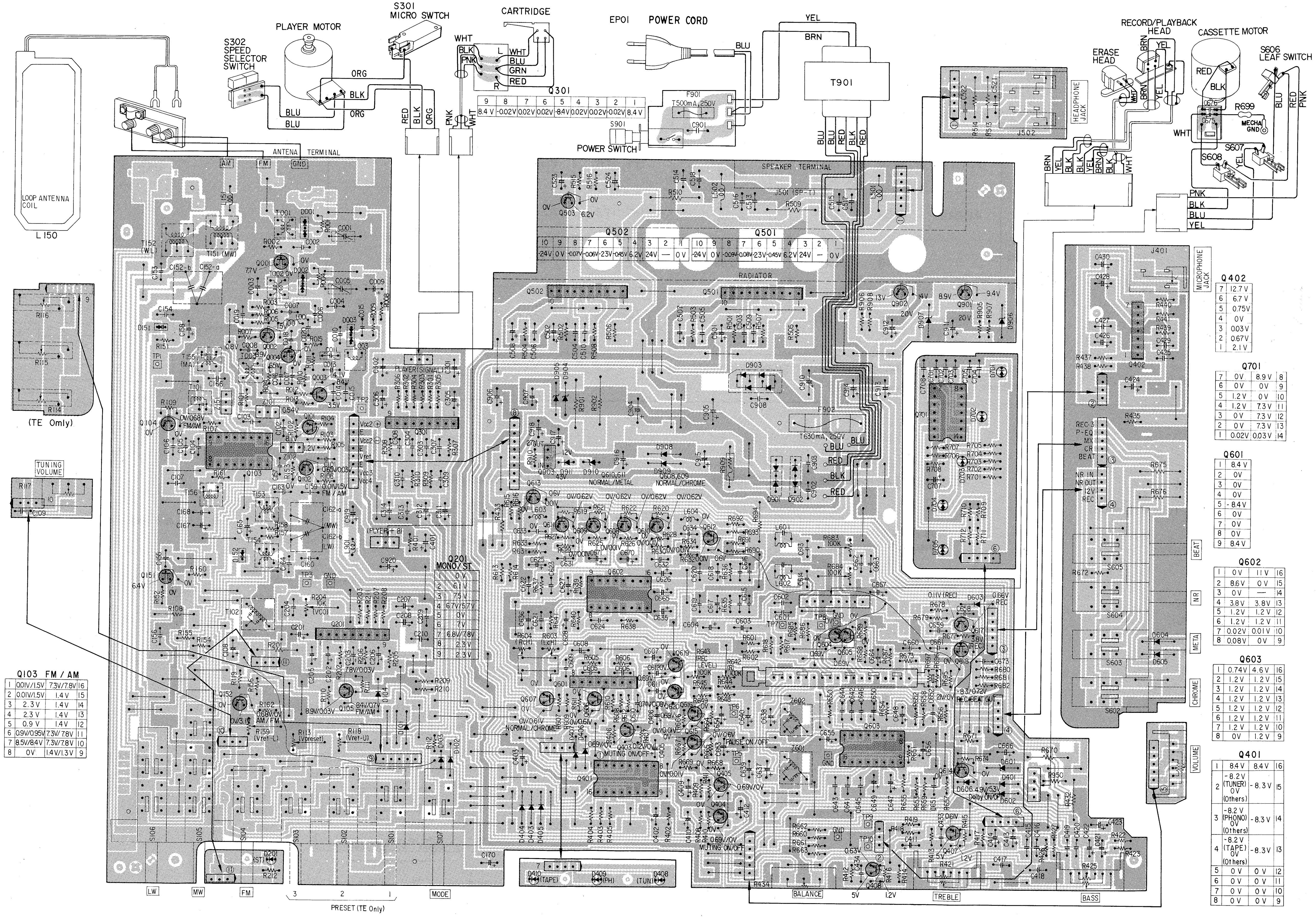

Signal Generator
Resistance
TP9
TP10
R634
R644
R/P AMP (L)
R/P AMP (R)
TP5
TP6
VTVM
VTVM

Figure 23.

6. ELECTRICAL PARTS LOCATIONS (TE)


S301
MICRO SWTCH
CARTRIDGE
EP01
POWER CORD
PLAYER MOTOR
S302
SPEED
SELECTOR
SWITCH
ORG
BLK
BLU
WHT
PNK
GRN
RED
YEL
BRN
L
R
T901
F901
T500mA 250V
S901
POWER SWITCH
C901
ANTENA TERMINAL
AM
FM
GND
LOOP ANTENNA COIL
L150
(TE Omly)
TUNING VOLUME
R116
R115
R114
R117
C109
SPEAKER TERMINAL
J501 (SP-T)
RADIATOR
HEADPHONE JACK
J502
RECORD/PLAYBACK HEAD
ERASE HEAD
CASSETTE MOTOR
S606 LEAF SWITCH
R699
MECHA GND
S607
S608
MICROPHONE JACK
J401
PLAYER (SIGNAL)
PLAYER + B
F902
T630mA 250V
NORMAL/METAL
NORMAL/CHROME
MUTING ON/OFF
PAUSE ON/OFF
Dolby ON/OFF
BEAT
NR
META
CHROME
VOLUME
S101
S102
S103
S104
S105
S106
S107
LW
MW
FM
MODE
PRESET (TE Only)
3
2
1
(TAPE)
(PH)
(TUN)
BALANCE
5V
12V
TREBLE
BASS

Q301

9	8	7	6	5	4	3	2	1
8.4 V	-0.02V	0.02V	0.02V	-8.4V	0.02V	0.02V	-0.02V	8.4 V

Q502

10	9	8	7	6	5	4	3	2	1
-24V	0 V	-0.07V	-0.06V	-23V	-0.45V	6.2V	24V	—	0 V

Q501

10	9	8	7	6	5	4	3	2	1
-24V	0 V	-0.09V	-0.08V	-23V	-0.45V	6.2V	24V	—	0 V

Q201
MONO / ST

1	0 V
2	6.1 V
3	7.5 V
4	6.7V/5.7V
5	0V
6	7V
7	6.8V/7.8V
8	2.3V
9	2.3V

Q103 FM / AM

1	0.01V/1.5V	7.3V/7.8V	16
2	0.01V/1.5V	1.4 V	15
3	2.3 V	1.4 V	14
4	2.3 V	1.4 V	13
5	0.9 V	1.4 V	12
6	0.9V/0.95V	7.3V/ 7.8V	11
7	8.5V/8.4V	7.3V/7.8V	10
8	0V	1.4V/1.3V	9

Q402

7	12.7 V
6	6.7 V
5	0.75V
4	0V
3	0.03V
2	0.67V
1	2.1 V

Q701

7	0V	8.9 V	8
6	0 V	0V	9
5	1.2 V	0 V	10
4	1.2 V	7.3 V	11
3	0 V	7.3 V	12
2	0 V	7.3 V	13
1	0.02V	0.03 V	14

Q601

1	8.4 V
2	0V
3	0V
4	0V
5	- 8.4 V
6	0V
7	0V
8	0V
9	8.4 V

Q602

1	0 V	11 V	16
2	8.6 V	0 V	15
3	0 V	—	14
4	3.8 V	3.8 V	13
5	1.2 V	1.2 V	12
6	1.2 V	1.2 V	11
7	0.02V	0.01 V	10
8	0.08V	0 V	9

Q603

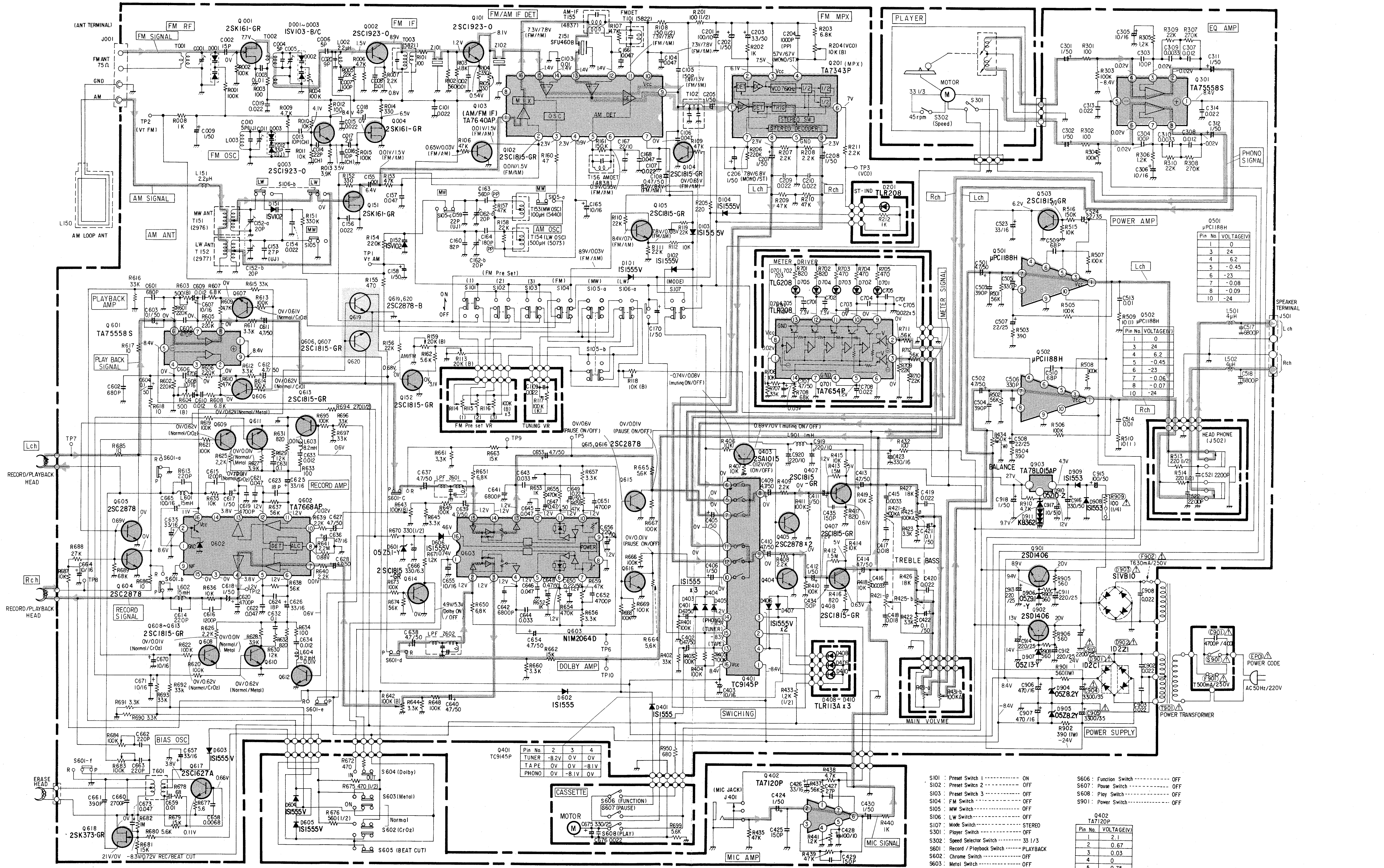
1	0.74V	4.6 V	16
2	1.2 V	1.2 V	15
3	1.2 V	1.2 V	14
4	1.2 V	1.2 V	13
5	1.2 V	1.2 V	12
6	1.2 V	1.2 V	11
7	1.2 V	1.2 V	10
8	0V	1.2 V	9

Q401

1	8.4 V	8.4 V	16
2	-8.2 V (TUNER) 0 V (Others)	- 8.3 V	15
3	-8.2 V (PHONO) 0V (Others)	- 8.3 V	14
4	-8.2 V (TAPE) 0V (Others)	- 8.3 V	13
5	0 V	0 V	12
6	0 V	0 V	11
7	0 V	0 V	10
8	0 V	0 V	9

Figure 24.

7. SCHEMATIC DIAGRAM (TE)


FM RF
FM SIGNAL
FM IF
FM/AM IF DET
FM MPX
FM OSC
AM SIGNAL
AM ANT
AM LOOP ANT
PLAYER
EQ AMP
PHONO SIGNAL
POWER AMP
METER DRIVER
METER SIGNAL
PLAYBACK AMP
PLAY BACK SIGNAL
RECORD AMP
RECORD SIGNAL
BIAS OSC
DOLBY AMP
SWICHING
MAIN VOLVME
POWER SUPPLY
CASSETTE
MIC AMP
MIC SIGNAL
FM Pre set VR
TUNING VR
HEAD PHONE
SPEAKER TERMINAL
RECORD/PLAYBACK HEAD
ERASE HEAD
POWER TRANSFORMER
POWER CODE
AC 50Hz/220V

Q501
μPC1188H

Pin No.	VOLTAGE(V)
1	0
3	24
4	6.2
5	-0.45
6	-23
7	-0.08
8	-0.09
10	-24

Q502
μPC1188H

Pin No.	VOLTAGE(V)
1	0
3	24
4	6.2
5	-0.45
6	-23
7	-0.06
8	-0.07
10	-24

Q401
TC9145P

Pin No.	2	3	4
TUNER	-8.2V	0V	0V
TAPE	0V	0V	-8.1V
PHONO	0V	-8.1V	0V

S101 : Preset Switch 1 ------------ ON
S102 : Preset Switch 2 ---------- OFF
S103 : Preset Switch 3 ------------ OFF
S104 : FM Switch -------------- OFF
S105 : MW Switch --------------- OFF
S106 : LW Switch --------------- OFF
S107 : Mode Switch -------------- STEREO
S301 : Player Switch ------------- OFF
S302 : Speed Selector Switch --------- 33 1/3
S601 : Record / Playback Switch ------ PLAYBACK
S602 : Chrome Switch ------------- OFF
S603 : Metal Switch -------------- OFF
S604 : Dolby Switch -------------- OUT
S605 : Beat Cut Switch -------------- OFF

S606 : Function Switch ----------- OFF
S607 : Pause Switch ----------- OFF
S608 : Play Switch ------------- OFF
S901 : Power Switch ------------- OFF

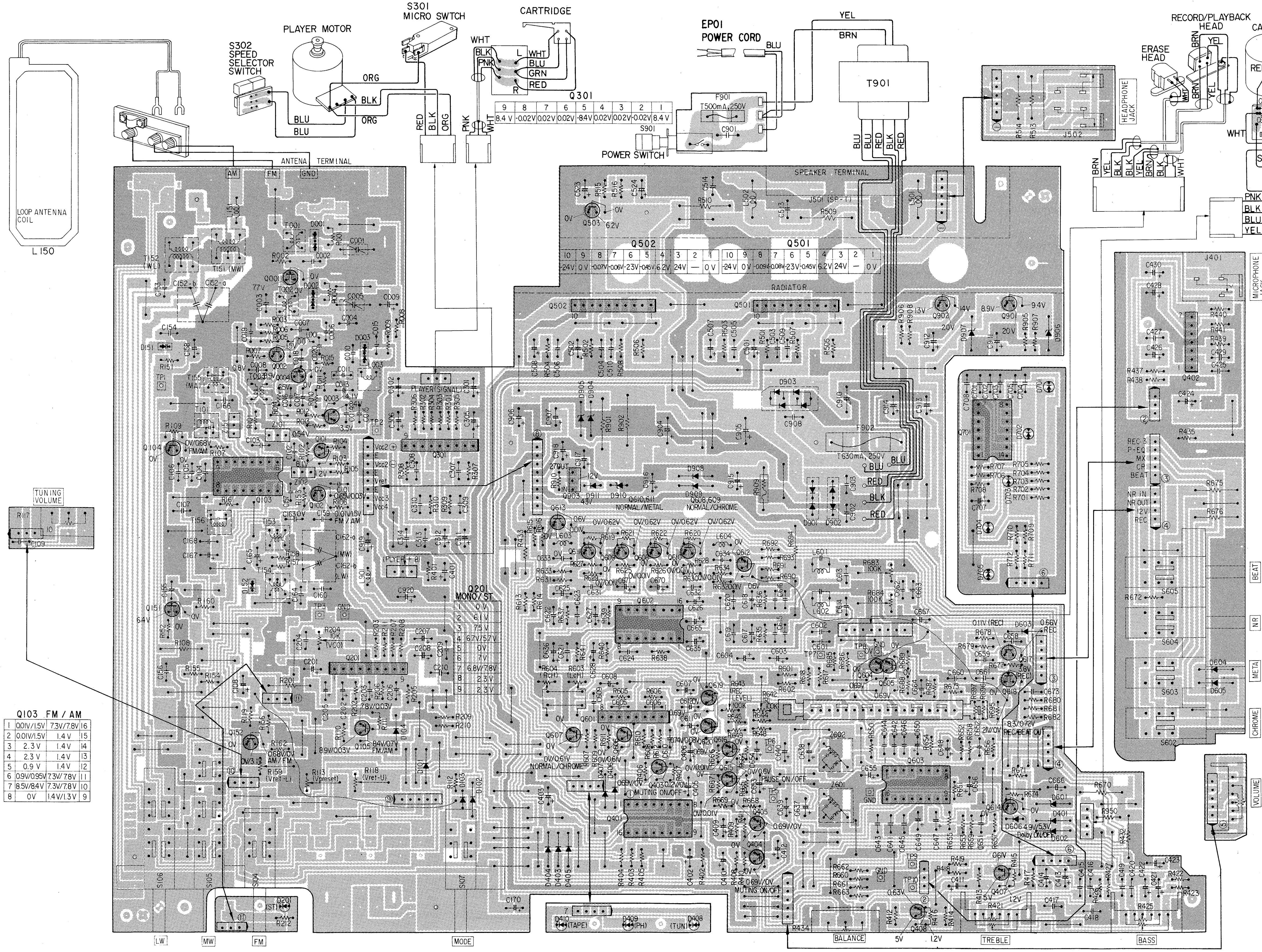
Q402
TA7120P

Pin No.	VOLTAGE(V)
1	2.1
2	0.67
3	0.03
4	0
5	0.75
6	6.7
7	12.7

Figure 25.

▨ Parts setting a net are used for sets over 5000.

8. ELECTRICAL PARTS LOCATIONS (TU)


S301
MICRO SWTCH
CARTRIDGE
PLAYER MOTOR
S302
SPEED
SELECTOR
SWITCH
ORG
BLK
BLU
WHT
PNK
GRN
RED
L
R
EP01
POWER CORD
YEL
BRN
T901
F901
T500mA,250V
C901
S901
POWER SWITCH
RECORD/PLAYBACK
HEAD
CASSETTE MOTOR
ERASE
HEAD
S606
LEAF SWITCH
R699
MECHA
GND
S607
S608
HEADPHONE
JACK
J502
ANTENA TERMINAL
AM
FM
GND
LOOP ANTENNA
COIL
L150
SPEAKER TERMINAL
J501 (SP-T)
RADIATOR
PLAYER SIGNAL
MICROPHONE
JACK
J401
TUNING
VOLUME
R117
F902
T630mA, 250V
NORMAL/METAL
NORMAL/CHROME
MUTING ON/OFF
PAUSE ON/OFF
REC LEVEL
REC/BEAT CUT
Dolby ON/OFF
BEAT
NR
META
CHROME
VOLUME
LW
MW
FM
MODE
BALANCE
TREBLE
BASS
D410 (TAPE)
D409 (PH)
D408 (TUN)
D201 (ST)

Q301

9	8	7	6	5	4	3	2	1
8.4 V	-0.02V	0.02V	0.02V	-8.4V	0.02V	0.02V	-0.02V	8.4 V

Q502

10	9	8	7	6	5	4	3	2	1
-24V	0 V	-0.07V	-0.06V	-23V	-0.45V	6.2V	24V	—	0 V

Q501

10	9	8	7	6	5	4	3	2	1
-24 V	0 V	-0.09V	-0.08V	-23V	-0.45V	6.2V	24V	—	0 V

Q201
MONO/ST

1	0V
2	6.1V
3	7.5V
4	6.7V/5.7V
5	0V
6	7V
7	6.8V/7.8V
8	2.3V
9	2.3V

Q103 FM / AM

1	0.01V/1.5V	7.3V/7.8V	16
2	0.01V/1.5V	1.4 V	15
3	2.3 V	1.4 V	14
4	2.3 V	1.4 V	13
5	0.9 V	1.4 V	12
6	0.9V/0.95V	7.3V/ 7.8V	11
7	8.5V/8.4V	7.3V/7.8V	10
8	0V	1.4V/1.3V	9

Q402

7	12.7 V
6	6.7 V
5	0.75V
4	0V
3	0.03 V
2	0.67V
1	2.1 V

Q701

7	0V	8.9 V	8
6	0V	0V	9
5	1.2 V	0 V	10
4	1.2 V	7.3 V	11
3	0 V	7.3 V	12
2	0 V	7.3 V	13
1	0.02V	0.03 V	14

Q601

1	8.4 V
2	0V
3	0V
4	0V
5	- 8.4V
6	0V
7	0V
8	0V
9	8.4 V

Q602

1	0 V	11 V	16
2	8.6 V	0 V	15
3	0 V	—	14
4	3.8 V	3.8 V	13
5	1.2 V	1.2 V	12
6	1.2 V	1.2 V	11
7	0.02V	0.01 V	10
8	0.08V	0 V	9

Q603

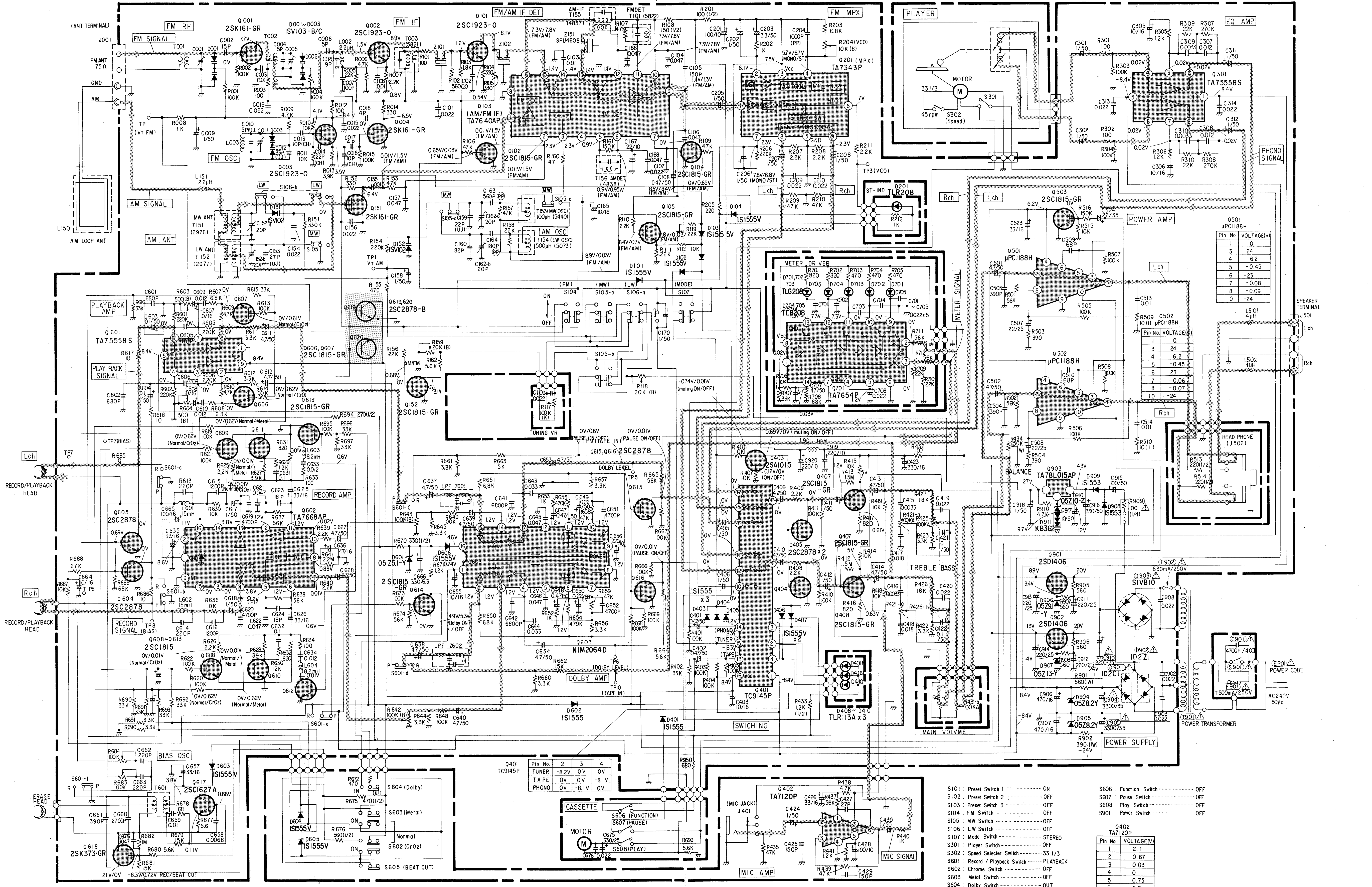
1	0.74V	4.6 V	16
2	1.2 V	1.2 V	15
3	1.2 V	1.2 V	14
4	1.2 V	1.2 V	13
5	1.2 V	1.2 V	12
6	1.2 V	1.2 V	11
7	1.2 V	1.2 V	10
8	0V	1.2 V	9

Q401

1	8.4 V	8.4 V	16
2	-8.2 V (TUNER) 0V (Others)	- 8.3 V	15
3	-8.2 V (PHONO) 0V (Others)	- 8.3 V	14
4	-8.2 V (TAPE) 0V (Others)	- 8.3V	13
5	0 V	0 V	12
6	0 V	0 V	11
7	0 V	0 V	10
8	0 V	0 V	9

Figure 26.

9. SCHEMATIC DIAGRAM(TU)


FM RF
FM SIGNAL
FM IF
FM/AM IF DET
FM MPX
PLAYER
EQ AMP
PHONO SIGNAL
FM OSC
AM SIGNAL
AM ANT
AM LOOP ANT
PLAYBACK AMP
PLAY BACK SIGNAL
RECORD AMP
RECORD SIGNAL
BIAS OSC
DOLBY AMP
TUNING VR
METER DRIVER
METER SIGNAL
POWER AMP
HEAD PHONE (J502)
SPEAKER TERMINAL J501
SWICHING
MAIN VOLVME
TREBLE BASS
BALANCE
POWER SUPPLY
POWER TRANSFORMER
POWER CODE
AC240V 50Hz
CASSETTE
MOTOR
MIC AMP
MIC SIGNAL
(MIC JACK) J401
RECORD/PLAYBACK HEAD
ERASE HEAD
TA7640AP
TA7343P
TA75558S
μPC1188H
TA7668AP
NIM2064D
TC9145P
TA7654P
TA78L015AP
TA7120P
S604 (Dolby)
S603 (Metal)
S602 (CrO2)
S605 (BEAT CUT)
S606 (FUNCTION)
S607 (PAUSE)
S608 (PLAY)
S301
S302 (Speed)
45 rpm
33 1/3

Q501
μPC1188H

Pin No.	VOLTAGE(V)
1	0
3	24
4	6.2
5	-0.45
6	-23
7	-0.08
8	-0.09
10	-24

Q502
μPC1188H

Pin No.	VOLTAGE(V)
1	0
3	24
4	6.2
5	-0.45
6	-23
7	-0.06
8	-0.07
10	-24

Q401
TC9145P

Pin No.	2	3	4
TUNER	-8.2V	0V	0V
TAPE	0V	0V	-8.1V
PHONO	0V	-8.1V	0V

S101 : Preset Switch 1 ------------ ON
S102 : Preset Switch 2 ------------ OFF
S103 : Preset Switch 3 ------------ OFF
S104 : FM Switch -------------- OFF
S105 : MW Switch -------------- OFF
S106 : LW Switch -------------- OFF
S107 : Mode Switch -------------- STEREO
S301 : Player Switch ------------ OFF
S302 : Speed Selecter Switch --------- 33 1/3
S601 : Record / Playback Switch ------ PLAYBACK
S602 : Chrome Switch ------------ OFF
S603 : Metal Switch ------------ OFF
S604 : Dolby Switch ------------- OUT
S605 : Beat Cut Switch ------------ OFF

S606 : Function Switch ------------ OFF
S607 : Pause Switch --------------- OFF
S608 : Play Switch --------------- OFF
S901 : Power Switch -------------- OFF

Q402
TA7120P

Pin No.	VOLTAGE(V)
1	2.1
2	0.67
3	0.03
4	0
5	0.75
6	6.7
7	12.7

Figure 27.

▨ Parts setting a net are used for sets over 5000.

10. MECHANISM EXPLODED VIEW

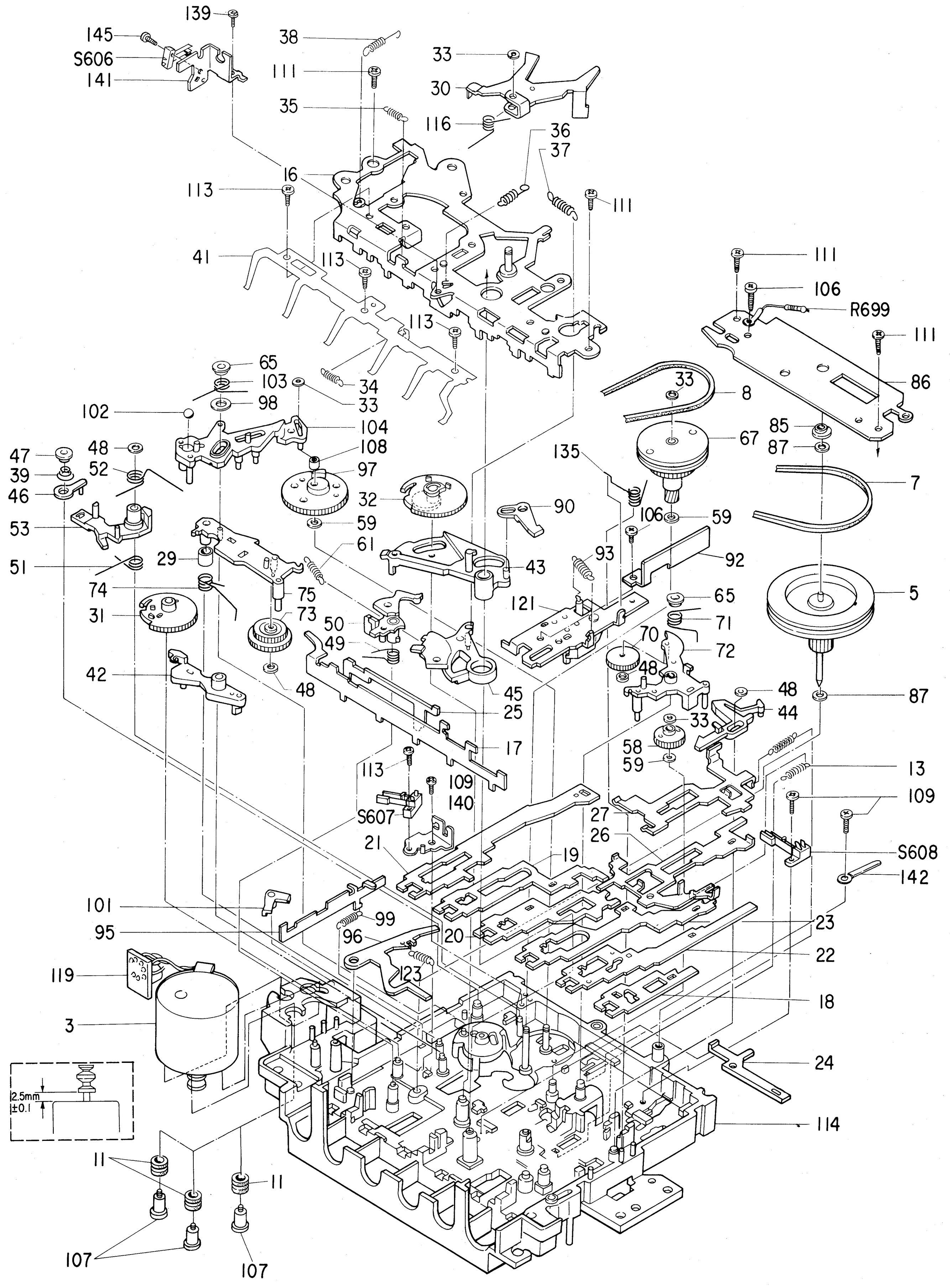

139
145
S606
141
38
33
111
30
35
116
36
37
16
113
111
41
113
113
111
106
R699
111
86
65
103
98
34
33
102
104
108
97
8
33
67
85
87
47
48
39
52
46
53
32
59
90
135
106
59
7
61
51
29
93
92
74
75
73
43
65
5
31
50
49
121
71
70
72
42
48
48
45
25
48
44
87
58
33
59
17
113
109
140
13
109
S607
27
26
21
19
S608
142
101
95
99
96
20
23
22
119
123
18
3
24
114
2.5mm
±0.1
11
11
107
107

Figure 28.

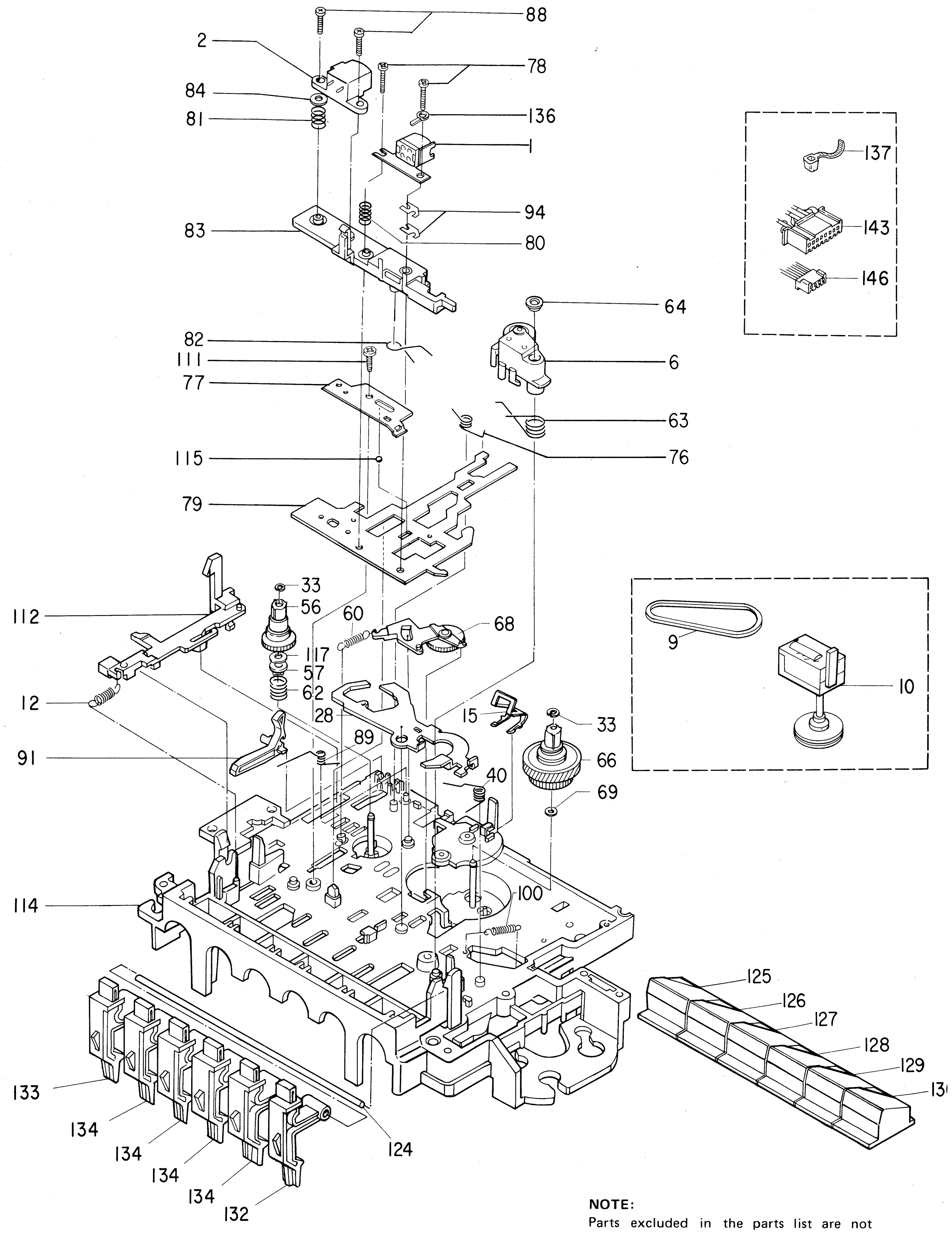

88
2
78
84
136
81
1
137
143
146
94
83
80
64
82
111
6
77
63
115
76
79
33
56
60
68
112
117
57
62
12
28
15
33
9
10
89
91
66
40
69
114
100
125
126
127
128
129
13
133
134
134
124
134
134
132

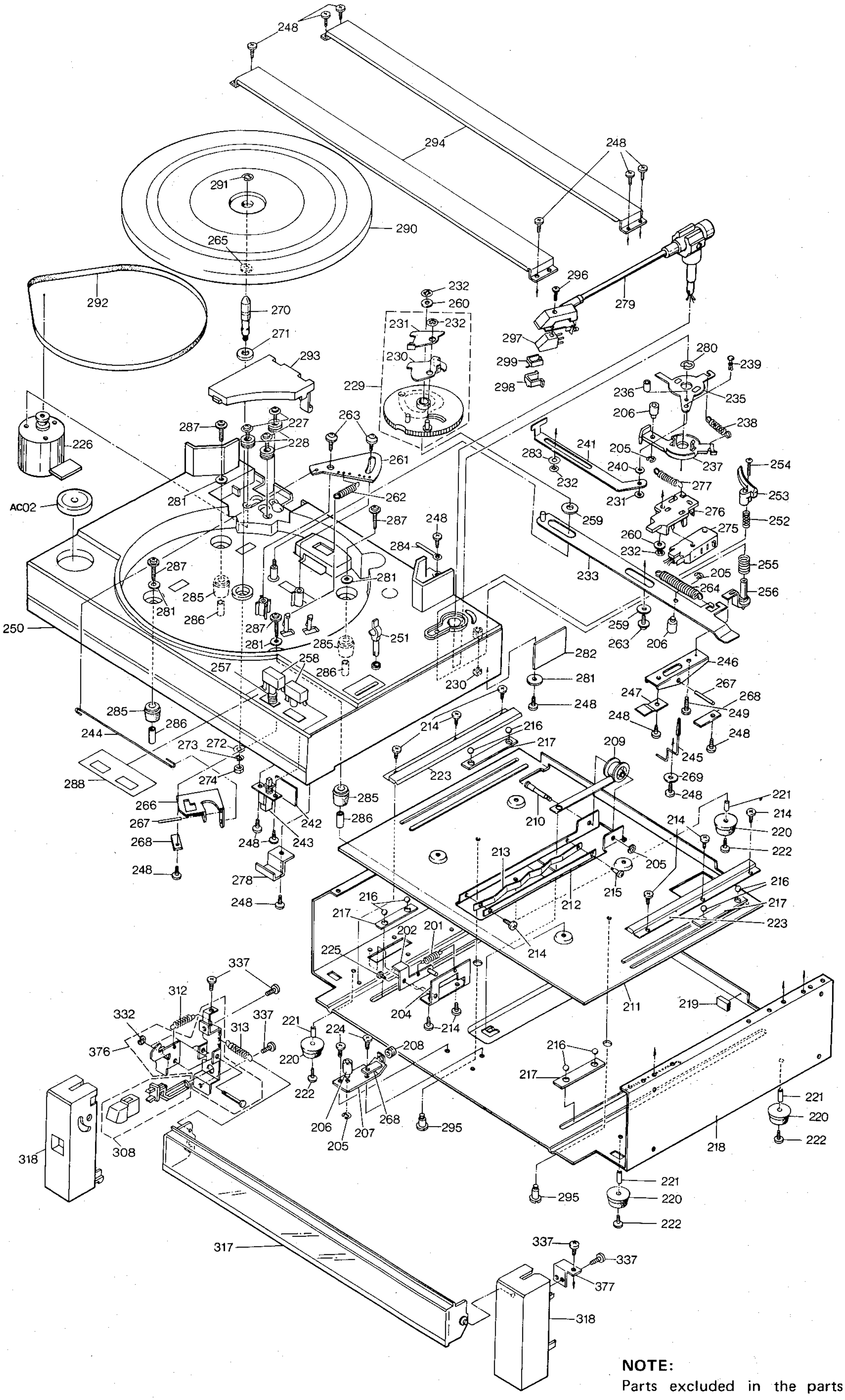
Figure 29.

NOTE:
Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

11. PARTS LIST (MECHANICAL)

Symbol No.	Part No.	Description
MECHANISM PARTS		
1	22217406	Head, Record/Playback, HRPT-406
2	22218249	Head, Erase, HET-65
3	25791642	Motor Ass'y
5	25717575	Flywheel Ass'y
6	25717533	Pressure Roller Ass'y
7	25755548	Belt, Drive
8	25755549	Belt, Center
9	25755377	Belt, Counter
10	25873282	Counter
11	25761327	Cushion, Motor
12	25776484	Spring
13	25776487	Spring
15	25779298	Spring, Cassette Holder
17	25749023	Lock Plate
18	25741943	Stop Operation Plate
19	25741944	FF Operation Plate
20	25749020	Play Operation Plate
21	25741946	Pause Operation Plate
22	25741998	Record Operation Plate (B)
23	25741948	REW Operation Plate
28	25748919	Cue Lever
30	25748927	Release Lever
31	25756374	Cam Gear, Pause
32	25756373	Cam Gear, Play
33	25766050	Washer, 1.6ϕ
34	25776488	Spring
35	25776489	Spring
36	25776589	Spring
37	25776494	Spring
38	25776521	Spring
39	25777182	Spring, Pause Lock Lever
40	25778040	Spring, Cue Lever
41	25779278	Spring, Operation Plate
42	25782546	Pause Drive Lever
43	25782549	Play Drive Lever
44	25782552	Select Lever
45	25784085	Lock Lever, Play Gear
46	25782560	Pause Lock
47	25783211	Bushing
48	25783239	Bushing
49	25778048	Spring, Pause Gear Lock Lever
50	25782554	Pause Gear Lock Lever
51	25778047	Spring, ASO Pause Lever
52	25778049	Spring, Pause Support
53	25782543	ASO Pause Lever
56	25754425	Supply Reel Plate
57	25754439	Spacer
58	25756375	REW Gear
59	25766112	Washer
60	25776482	Spring
61	25776492	Spring
62	25777144	Spring, Back Tension
63	25778042	Spring, Pressure Roller
64	25783260	Bushing, BLK
65	25783226	Bushing
66	25712423	Take-up Reel Plate Ass'y
67	25713561	Center Clutch Ass'y
68	25784125	Sub Take-up Lever Ass'y
69	25766042	Washer
70	25756304	REW Gear
71	25778045	Spring, REW Lever
72	25784084	REW Lever
73	25756306	FF Gear
74	25778104	Spring, FF Lever
75	25782548	FF Lever
76	25778041	Spring, Head Slider
78	22707833	Special Screw, 2ϕ x 9mm
80	25777137	Spring, Azimuth
81	25772579	Spring, Erase Head Lever
82	25778043	Spring, Head Mount
83	25781259	Head Mount
84	22703281	Washer, 2.6ϕ
85	25725340	Holder, Flywheel
87	25766043	Washer
88	22707507	Screw, 2ϕ x 8mm, BID
89	25778039	Spring, REC Lock Lever
90	25782545	REC Lever (A)
91	25782557	REC Lock Lever
92	25746190	REC Plate
93	25776481	Spring
94	25735266	Spacer, Adjust
97	25756310	ASO Gear
98	25766073	Washer
99	25776490	Spring
100	25776491	Spring
101	25782561	ASO Relate Lever
102	25757130	Steel Ball, 5ϕ
103	25778046	Spring, ASO Detector Lever
104	25782550	ASO Detector Lever
106	22707350	Screw, 2.6ϕ x 5mm, DTBID
107	22707747	Special Screw, Motor
109	22707870	Screw, 2ϕ x 8mm, PAN Tapping
111	22707301	Screw, 2.6ϕ x 8mm, BID Tapping
112	25784080	Eject Slider
113	22707426	Screw, 2ϕ x 5mm, DTBID
114	25791612	Main Chassis Ass'y
115	25757129	Steel Ball, 2ϕ
116	25778079	Spring
117	25764597	Washer
121	25791611	Record Slider Ass'y (B)
123	25776526	Spring
125	25886003	Button, Stop
126	25886004	Button, Record
127	25886005	Button, Rewind
128	25886006	Button, Play
129	25886007	Button, FF
130	25886008	Button, Pause
132	25784079	Pause Operation Lever
133	25784078	Stop Operation Lever
134	25784077	Operation Lever, Knob
135	25778128	Spring, REC Slider
139	22707530	Screw, 2ϕ x 10mm, BID Tapping

12. EXPLODED VIEW (PLAYER)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NOTE:
Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

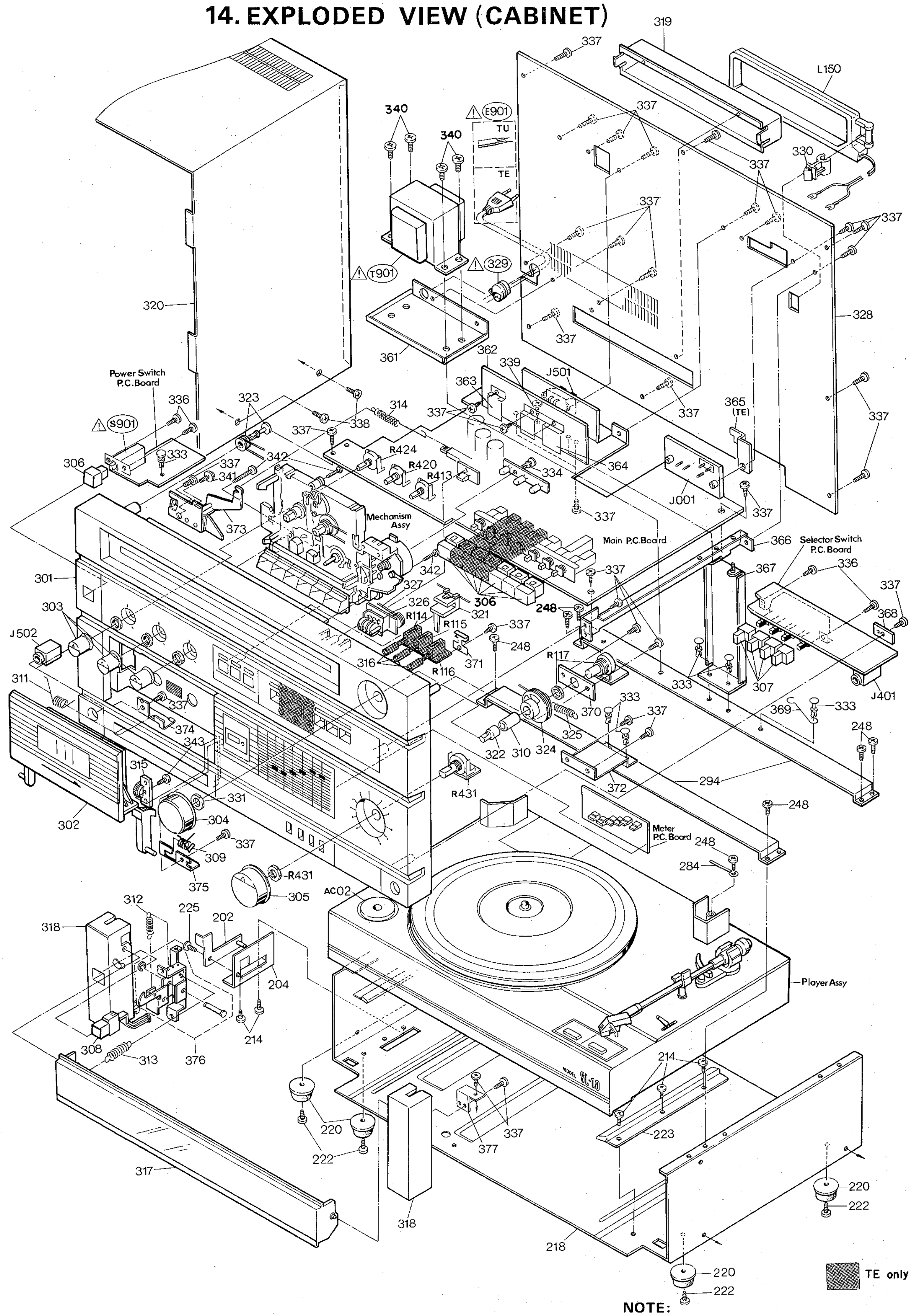
Figure 30.

13. PARTS LIST (PLAYER)

Symbol No.	Part No.	Description
PLAYER PARTS		
201	25777300	Spring, Transfer Plate
205	22703279	E Ring, 3ϕ
206	20764072	Pin, Adjust
208	20881298	Rubber Cushion
209	25779387	Drive Spring Unit
214	22707910	Screw, 3ϕ x 5mm, BID Tapping
215	22708073	Special Screw
216	25757130	Steel Ball, 5ϕ
217	20743146	Ball Guide Plate
220	22828031	Foot
222	22707200	Screw, 3ϕ x 10mm
224	22707942	Screw, 3ϕ x 6mm, BID Tapping
225	22708074	Special Screw
226	25791665	Motor Ass'y, With Pulley
227	22708075	Screw, Motor
228	20881299	Cushion, Motor
229	20721083	Main Gear Ass'y
232	20798033	CS Ring, 3ϕ
237	20754103	PU Stopper
238	25777301	PU Spring
239	22705020	Plastic Rivet, 3ϕ x 4.5mm
240	25766142	Thrust Washer
241	20754104	Trip Lever
242	22196351	Push Switch, Speed Selector
244	25775269	Cut Wire
245	20754105	Cue Lever Ass'y
248	22707842	Screw, 3ϕ x 8mm, BID Tapping
249	22708076	Screw, 3ϕ x 16mm, FLT
250	20815215	Cabinet
251	20731314	PU Rest
252	25777302	Spring, Lift
253	20735070	Lifter
254	22708077	Screw, 2.6ϕ x 16mm, FLT
255	25777303	Cue Spring
256	20764073	Lift Lever
257	25777304	Spring, Button
258	20754106	Button, Speed/Cue
259	25766143	Washer, Main Gear
260	22752896	Washer, 3ϕ
262	25777306	Spring, Reject Arm
263	22707590	Screw, 3ϕ x 8mm
264	25777305	Spring, Drive Plate
265	25766144	Washer
270	20721084	Center Shaft
271	20725086	Turntable Holder
274	22702183	Nut, 4ϕ
275	22190095	Micro Switch, Player ON/OFF
276	20831383	Switch Base
277	25777307	Spring, Switch Base
279	20788163	PU Arm Ass'y
280	22703233	E Ring, 7ϕ
283	25766145	Washer
285	22828095	Foot, Rubber
286	20748102	Spacer, Foot
287	22707941	Screw, 3ϕ x 16mm, BID Tapping
288	20878062	Nameplate, Knob Decoration

Symbol No.	Part No.	Description
290	20723122	Turntable Ass'y
291	22703293	E Ring, 6ϕ
292	20728126	Belt, Turntable
293	20815216	Cover, Motor
295	22708078	Screw, 4ϕ, Transport
296	22707027	Screw, 2ϕ x 10mm
297	22155099	Cartridge, CN-5496
298	20781224	Stylus Cover

14. EXPLODED VIEW (CABINET)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J501
Power Switch P.C.Board
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365 (TE)
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S901
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R424
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R420
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R413
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Mechanism Assy
J001
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Main P.C.Board
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Selector Switch P.C.Board
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Meter P.C.Board
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R431
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Player Assy
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▨ TE only

NOTE:

Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Figure 31.

15. PARTS LIST (CABINET)

Symbol No.	Part No.	Description
CABINET PARTS		
301	22825211	Panel Ass'y (TE)
301	22825180	Panel Ass'y (TU)
302	25832838	Cassette Holder Ass'y
303	22884292	Knob, Bass/Treble/Balance
304	22884293	Knob, Tuning
305	22884294	Knob, Volume
306	22824457	Knob Ass'y, Mode/FM Preset/ Band Selector/Power (TE)
306	22824457	Knob Ass'y, Mode/Band Selector/Power (TU)
307	22824458	Knob Ass'y, Tape/Dolby/Beat
308	22824456	Knob Ass'y, Eject
309	25775264	Spring, Eject
310	25830265	Joint Knob, Tuning
311	25775257	Spring, Eject
312	25776586	Spring, Eject
313	25776587	Spring, Eject
314	25776625	Spring, Record
315	25881493	Damper Ass'y
316	25830270	Joint Preset (TE)
317	25832767	Dust Cover
318	20033200	Panel Side Ass'y
319	20033199	Cover, LP Disk
320	20015367	Top Cover (SL-10)
320	20015378	Top Cover (SL-10R)
321	22741426	Pointer
322	22749342	Tuning Shaft Ass'y
323	22742217	Pulley Ass'y
324	22742301	Drum
325	25776624	Spring, Drum
326	25873282	Counter
327	25755377	Belt, Counter
328	20015374	Jack Plate (SL-10-TE)
328	20015366	Jack Plate (SL-10-TU)
328	20015379	Jack Plate (SL-10R-TU)
⚠ 329	25845528	Cord Bush
330	22757120	Antenna Holder
331	22702106	Nut, 8ϕ
332	22703297	E Ring, 3ϕ
333	22705020	Plastic Rivet, 3ϕ x 4.5mm
334	22705026	Plastic Rivet, 3ϕ x 6.5mm
336	22707929	Screw, 2.6ϕ x 10mm, BID Tapping
337	22707842	Screw, 3ϕ x 8mm, BID Tapping
338	22707799	Screw, 3ϕ x 10mm, BID Tapping
339	22707802	Screw, 3ϕ x 12mm, BID Tapping
340	22707040	Screw, 4ϕ x 6mm, FTBID
341	22707798	Screw, 3ϕ x 10mm, BID Tapping
342	22707865	Screw, 3ϕ x 20mm, BID Tapping
343	22707852	Screw, 3ϕ x 12mm, BID Tapping

14. PARTS LIST

CAUTION: The ⚠ mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
TRANSISTORS, IC'S & DIODES		
Q001	A6042640	Transistor, 2SK161-GR
Q002, 003	A6319020	Transistor, 2SC1923-O
Q004	A6042640	Transistor, 2SK161-GR
Q101	A6319020	Transistor, 2SC1923-O
Q102	A6317460	Transistor, 2SC1815NEW-GR
Q103	B0356385	IC, TA7640AP
Q104, 105	A6317460	Transistor, 2SC1815NEW-GR
Q151	A6042640	Transistor, 2SK161-GR
Q152	A6317460	Transistor, 2SC1815NEW-GR
Q201	B0325350	IC, TA7343P
Q301	B0350510	IC, TA75558S
Q401	B0411450	IC, TC9145P
Q402	B0311008	IC, TA7120P
Q403	A6534060	Transistor, 2SA1015-GR
Q404, 405	A6342210	Transistor, 2SC2878-B
Q406, 407	A6317460	Transistor, 2SC1815NEW-GR
Q501, 502	22117208	IC, μPC1188H
Q503	A6317460	Transistor, 2SC1815NEW-GR
Q601	B0350510	IC, TA75558S
Q602	B0356690	IC, TA7668AP
Q603	22117209	IC, NJM2064
Q604, 605	A6342210	Transistor, 2SC2878-B
Q606, 607, 608, 609, 610, 611, 612, 613, 614	A6317460	Transistor, 2SC1815NEW-GR
Q615, 616	A6342210	Transistor, 2SC2878-B
Q617	A6314470	Transistor, 2SC1627A-Y
Q618	A6059510	Transistor, 2SK373-GR
Q619, 620	A6342210	Transistor, 2SC2878-B
Q701	B0356540	IC, TA7654P
Q901, 902	A6868010	Transistor, 2SD1406-O
Q903	B0373520	IC, TA78L015AP
D001, 002 003	22115935	Diode, 1SV103-B/C
D101, 102, 103, 104	A7246703	Diode, 1S1555V
D151, 152	22115930	Diode, 1SV102-JA-2 (TE)
D151, 152	22115931	Diode, 1SV102-JA-1 (TU)
D201	A8603140	Diode, TLR208, LED RED
D401, 403, 404, 405, 406, 407	A7246703	Diode, 1S1555V
D408, 409, 410	A8600607	Diode, TLR113A, LED RED
D601	A7110041	Diode, 05Z5.1-Y
D602, 603, 604, 605	A7246703	Diode, 1S1555V
D606	A7246703	Diode, 1S1555V
D701, 702, 703	A8606660	Diode, TLG208, LED GRN
D704, 705	A8603140	Diode, TLR208, LED RED
⚠ D901	A7682021	Diode, 1D2C1 (T)
⚠ D902	A7682061	Diode, 1D2Z1 (T)
⚠ D903	22115571	Diode, SIVB10
D904, 905	A7110208	Diode, 05Z8.2-Y
D906	A7110262	Diode, 05Z9.1-Y
D907	A7110462	Diode, 05Z13-Y
D908, 909	A7246601	Diode, 1S1553V
D910	A7110313	Diode, 05Z10-Z
D911	22115560	Diode, KB362-S
COILS & TRANSFORMERS		
L002	22291082	Choke Coil, 2.2μH
L003	22295155	Coil, FM Oscillator
L150	22242955	Coil, Loop Antenna
L151	22291082	Choke Coil, 2.2μH
L501, 502	22210152	Choke Coil, 4μH
L601, 602	22232282	Choke Coil, 15mH
L603, 604	22232283	Choke Coil, 8.2mH
L901	22232234	Choke Coil, 1mH
T001	22292179	Coil, FM Antenna
T002	22294488	Coil, FM RF
T003	22265821	IF Transformer, FM
T101	22265822	IF Transformer, FM
T102	22153193	Low-pass Filter, FTZ (TE)
T151	22242976	Coil, MW Antenna
T152	22242977	Coil, LW Antenna
T153	22205440	Coil, MW Oscillator
T154	22205073	Coil, LW Oscillator
T155	22264837	IF Transformer, AM
T156	22264838	IF Transformer, AM
T601	22235022	Coil, Bias Oscillator
⚠ T901	22224255	Transformer, Power (TE)
⚠ T901	22224232	Transformer, Power (TU)
ELECTRICAL PARTS		
S101, 102, 103, 104, 105, 106, 107	22196250	Push Switch, Preset 1/2 (TE) Preset 3/FM MW/LW MODE
S104, 105, 106, 107	22196248	Push Switch, FM/MW (TU) LW/MODE
S301	22190095	Micro Switch, Player ON/OFF
S302	22196351	Push Switch, Speed Selector
S601	22196303	Slide Switch, Record/Playback

Symbol No.	Part No.	Description
S602, 603, 604, 605	22196249	Push Switch, Dolby/Metal Chrome/Beat
S606	22195983	Leaf Switch, Function
S607	22196063	Leaf Switch, Pause
S608	22196064	Leaf Switch, Play
⚠ S901	22195631	Push Switch, Power
J001	22162463	Terminal, Antenna
J401	22198037	Jack, 6ϕ, Microphone
J501	22162518	Terminal, 4P, Speaker
J502	22198036	Jack, 6ϕ, Headphone
Z101, 102	22153292	Ceramic Filter, 10.7M
Z151	22153083	Ceramic Filter, 460B
Z601, 602	22153293	Dolby Filter
⚠ F901	22144408	Fuse, T500mA, 250V
⚠ F902	22144432	Fuse, T630mA, 250V
⚠ EP01	22176642	Power Cord (TE)
⚠ EP01	22176641	Power Cord (TU)
EP02	22165047	Fuse Holder

CAPACITORS

C=±0.25pF, D=±0.5pF, J=±5%, K=±10%, M=±20%, P=+100–0%, Z=+80–20%.

Abbreviations: CD = Ceramic Disk, EL = Electrolytic
BL = Barrier Layer, MY = Mylar,
PP = Polypropylene, PS = Polystyrene,
TT = Tantalum

Symbol No.	Part No.	Description
C001	22309194	Trimmer, Max 10pF
C002	22360132	CD, 15pF, 50V, J, CH
C003	22342103	CD, 0.01mfd, 50V, Z
C004	22361509	CD, 5pF, 50V, D
C005	22309194	Trimmer, Max 10pF
C006	22361509	CD, 5pF, 50V, D
C007	22362101	CD, 100pF, 50V, K
C008	22342103	CD, 0.01mfd, 50V, Z
C009	22488109	EL, 1mfd, 50V
C010	22360488	CD, 5pF, 50V, C, UJ
C011	22309190	Trimmer, Max 6pF
C012	22360181	CD, 33pF, 50V, J, UJ
C013	22360310	CD, 10pF, 50V, D, CH
C014	22360134	CD, 22pF, 50V, J, CH
C015	22342223	CD, 0.022mfd, 50V, Z
C016	22360310	CD, 10pF, 50V, D, CH
C017	22361209	CD, 2pF, 50V, D
C018	22361409	CD, 4pF, 50V, D
C019	22342223	CD, 0.022mfd, 50V, Z
C020	22361909	CD, 9pF, 50V, J
C101	22342223	CD, 0.022mfd, 50V, Z
C102	22342103	CD, 0.01mfd, 50V, Z
C103	22342103	CD, 0.01mfd, 50V, Z
C104	22342473	CD, 0.047mfd, 50V, Z
C105	22349151	CD, 150pF, 50V, K
C106	22342473	CD, 0.047mfd, 50V, Z
C107	22342223	CD, 0.022mfd, 50V, Z
C108	22488478	EL, 0.47mfd, 50V
C109	22342223	CD, 0.022mfd, 50V, Z
C152a-b	22309184	Trimmer, Max 16pF x 2
C153	22361270	CD, 27pF, 50V, J
C154	22342223	CD, 0.022mfd, 50V, Z
C155	22342103	CD, 0.01mfd, 50V, Z
C156	22342223	CD, 0.022mfd, 50V, Z
C157	22342473	CD, 0.047mfd, 50V, Z
C158	22488109	EL, 1mfd, 50V
C159	22360179	CD, 22pF, 50V, K, UJ
C160	22362820	CD, 82pF, 50V, K
C162a-b	22309184	Trimmer, Max 16pF x 2
C163	22321054	PP, 560pF, 50V, J
C164	22321084	PP, 180pF, 50V, J
C165	22485100	EL, 10mfd, 16V
C166	22342473	CD, 0.047mfd, 50V, Z
C167	22483220	EL, 22mfd, 10V
C168	22342473	CD, 0.047mfd, 50V, Z
C170	22488109	EL, 1mfd, 50V
C201	22483101	EL, 100mfd, 10V
C202	22488109	EL, 1mfd, 50V
C203	22488339	EL, 3.3mfd, 50V
C204	22321057	PP, 1000pF, 50V, J
C205, 206	22488109	EL, 1mfd, 50V
C207, 208	22488109	EL, 1mfd, 50V
C209, 210	22360548	BL, 0.022mfd, 25V, K
C301, 302	22488109	EL, 1mfd, 50V
C303, 304	22362101	CD, 100pF, 50V, K (TE)
C305, 306	22485100	EL, 10mfd, 16V
C307, 308	22360545	BL, 0.012mfd, 25V, K
C309, 310	22360538	BL, 3300pF, 25V, K
C311, 312	22488109	EL, 1mfd, 50V
C313, 314	22342223	CD, 0.022mfd, 50V, Z
C401, 402	22488478	EL, 0.47mfd, 50V
C403	22485100	EL, 10mfd, 16V
C405, 406	22488109	EL, 1mfd, 50V
C409, 410	22488479	EL, 4.7mfd, 50V
C411, 412	22488109	EL, 1mfd, 50V
C413, 414	22488479	EL, 4.7mfd, 50V
C415, 416	22360538	BL, 3300pF, 25V, K
C417, 418	22360547	BL, 0.018mfd, 25V, K
C419, 420	22360548	BL, 0.022mfd, 25V, K
C421, 422	22488108	EL, 0.1mfd, 50V
C423	22485331	EL, 330mfd, 16V
C424	22488109	EL, 1mfd, 50V
C425	22349151	CD, 150pF, 50V, K
C426	22485330	EL, 33mfd, 16V
C427	22361270	CD, 27pF, 50V, J
C428	22483101	EL, 100mfd, 10V
C429	22349151	CD, 150pF, 50V, K
C430	22488109	EL, 1mfd, 50V
C434, 435	22349151	CD, 150pF, 50V, K (TE)
C501, 502	22488479	EL, 4.7mfd, 50V

Symbol No.	Part No.	Description
C503, 504	22349391	CD, 390pF, 50V, K
C505, 506	22349331	CD, 330pF, 50V, K (TE)
C507, 508	22486220	EL, 22mfd, 25V
C509, 510	22362680	CD, 68pF, 50V, K
C513, 514	22371103	MY, 0.01mfd, 50V, J
C515, 516	22349471	CD, 470pF, 50V, K (TE)
C517, 518	22349682	CD, 6800pF, 50V, K (TE)
C521, 522	22349222	CD, 2200pF, 50V, K (TE)
C523	22485330	EL, 33mfd, 16V
C524	22487220	EL, 22mfd, 35V
C601, 602	22349681	CD, 680pF, 50V, K
C603, 604	22488108	EL, 0.1mfd, 50V
C605, 606	22349471	CD, 470pF, 50V, K
C607, 608	22485100	EL, 10mfd, 16V
C609, 610	22360545	BL, 0.012mfd, 25V, K
C611, 612	22488479	EL, 4.7mfd, 50V
C613, 614	22321164	PP, 220pF, 50V, J
C615, 616	22349122	CD, 1200pF, 50V, K
C617, 618	22488109	EL, 1mfd, 50V
C619, 620	22349472	CD, 4700pF, 50V, K
C621, 622	22342473	CD, 0.047mfd, 50V, Z
C623, 624	22361180	CD, 18pF, 50V, J
C625, 626	22485330	EL, 33mfd, 16V
C627, 628	22488479	EL, 4.7mfd, 50V
C631, 632	22360556	BL, 0.1mfd, 25V, K
C633, 634	22360545	BL, 0.012mfd, 25V, K
C635	22485330	EL, 33mfd, 16V
C636	22485470	EL, 47mfd, 16V
C637, 638	22488479	EL, 4.7mfd, 50V
C639, 640	22488479	EL, 4.7mfd, 50V
C641, 642	22372682	MY, 6800pF, 50V, K
C643, 644	22372333	MY, 0.033mfd, 50V, K
C645, 646	22371473	MY, 0.047mfd, 50V, J
C647, 648	22488478	EL, 0.47mfd, 50V
C649, 650	22488228	EL, 0.22mfd, 50V
C651, 652	22372472	MY, 4700pF, 50V, K
C653, 654	22488479	EL, 4.7mfd, 50V
C655	22485100	EL, 10mfd, 16V
C656	22483221	EL, 220mfd, 10V
C657	22485330	EL, 33mfd, 16V
C658	22372682	MY, 6800pF, 50V, K
C659	22371103	MY, 0.01mfd, 50V, J
C660	22380099	PS, 2700pF, 200V, K
C661	22380122	PS, 390pF, 125V, K
C662, 663	22349221	CD, 220pF, 50V, K
C664	22485100	EL, 10mfd, 16V
C665	22485101	EL, 100mfd, 16V
C666	22483331	EL, 330mfd, 6.3V
C670, 671	22485100	EL, 10mfd, 16V
C673	22360484	CD, 0.047mfd, 50V, Z
C675	22486331	EL, 330mfd, 25V
C676	22342223	CD, 0.022mfd, 50V, Z
C701, 702	22360633	BL, 0.022mfd, 25V, K
C703, 704	22360633	BL, 0.022mfd, 25V, K

Symbol No.	Part No.	Description
C705	22360633	BL, 0.022mfd, 25V, K
C707	22490078	TT, 4.7mfd, 50V
C708	22360633	BL, 0.022mfd, 25V, K
⚠ C901	22340150	CD, 4700pF, 400V, M
C902, 903	22342223	CD, 0.022mfd, 50V, Z
⚠ C904, 905	22487332	EL, 3300mfd, 35V
C906, 907	22485471	EL, 470mfd, 16V
C908	22342223	CD, 0.022mfd, 50V, Z
⚠ C910	22486222	EL, 2200mfd, 25V
C911, 912	22487221	EL, 220mfd, 25V
C913, 914	22487221	EL, 220mfd, 25V
C915	22488101	EL, 100mfd, 50V
C916	22488331	EL, 330mfd, 50V
C917	22488100	EL, 10mfd, 50V
C918	22488109	EL, 1mfd, 50V
C919, 920	22483221	EL, 220mfd, 10V
RESISTORS **All resistors are ¼W, ±5% carbon film unless otherwise noted. 1K ohm = 1000 ohm, 1M ohm = 1,000,000 ohm**		
R001, 002	22545104	100K ohm
R003	22545101	100 ohm
R004	22545104	100K ohm
R005	22545223	22K ohm
R006	22545472	4.7K ohm
R007	22545222	2.2K ohm
R008	22545102	1K ohm
R009	22545472	4.7K ohm
R010	22545103	10K ohm
R011	22545103	10K ohm
R012	22545101	100 ohm
R013	22545392	3.9K ohm
R014	22545331	330 ohm
R015	22545104	100K ohm
R101	22545101	100 ohm
R102	22545561	560 ohm
R103	22545182	1.8K ohm
R104	22545331	330 ohm
R105	22545331	330 ohm
R106	22545473	47K ohm
R107	22545472	4.7K ohm
R108	22547151	150 ohm, ½W
R109	22545473	47K ohm
R110	22545223	22K ohm
R111	22545223	22K ohm
R112	22545103	10K ohm
R113	22658631	20K ohm Semi-fixed Variable (TE)
R114, 115	22658680	100K ohm Semi-fixed Variable (TE)
R116	22658680	100K ohm Semi-fixed Variable (TE)
R117	22627031	100K ohm Variable, Tuning

Symbol No.	Part No.	Description
R118	22658599	10K ohm Semi-fixed Variable (TE)
R118	22658631	20K ohm Semi-fixed Variable (TU)
R119	22545223	22K ohm
R151	22545334	330K ohm
R152	22545331	330 ohm
R153	22545473	47K ohm
R154	22545224	220K ohm
R155	22545471	470 ohm
R156	22545223	22K ohm
R157	22545473	47K ohm
R158	22545223	22K ohm
R159	22658631	20K ohm Semi-fixed Variable
R160	22545470	47 ohm
R161	22545154	150K ohm
R162	22545562	5.6K ohm
R201	22547101	100 ohm, 1/2W
R202	22547102	1K ohm, 1/2W
R203	22545682	6.8K ohm
R204	22658599	10K ohm Semi-fixed Variable
R205	22545221	220 ohm
R206	22545224	220K ohm
R207	22545222	2.2K ohm
R208	22545222	2.2K ohm
R209, 210	22545473	47K ohm
R211	22545222	2.2K ohm
R212	22545102	1K ohm
R301, 302	22545101	100 ohm
R303, 304	22545104	100K ohm
R305, 306	22545122	1.2K ohm
R307, 308	22545274	270K ohm
R309, 310	22545223	22K ohm
R401	22545104	100K ohm
R402	22545333	33K ohm
R403, 404, 405	22545104	100K ohm
R406	22545103	10K ohm
R407	22545103	10K ohm
R408, 409	22545222	2.2K ohm
R410, 411	22545104	100K ohm
R412, 413	22545155	1.5M ohm
R414, 415	22545103	10K ohm
R416, 417	22545821	820 ohm
R418, 419	22545103	10K ohm
R421-a-b	22627030	100K ohm, Variable, Treble
R422, 423	22545332	3.3K ohm
R425-a-b	22627030	100K ohm, Variable, Bass
R426, 427	22545183	18K ohm
R431-a-b	22627028	100K ohm, Variable, Volume
R432	22547101	100 ohm, 1/2W
R433	22547122	1.2K ohm, 1/2W
R434	22627029	250K ohm, Variable, Balance
R435	22545473	47K ohm
R437	22545563	56K ohm
R438	22545472	4.7K ohm
R439	22545473	47K ohm
R440	22545102	1K ohm
R441	22545122	1.2K ohm
R501, 502	22545563	56K ohm
R503, 504	22545391	390 ohm
R505, 506	22545104	100K ohm
R507, 508	22545104	100K ohm
R509, 510	22570250	10 ohm, 1W, Metal Film
R513, 514	22547221	220 ohm, 1/2W
R515	22545103	10K ohm
R516	22545154	150K ohm
R601, 602	22545224	220K ohm
R603, 604	22658601	500 ohm Semi-fixed Variable
R605, 606	22545224	220K ohm
R607, 608	22545682	6.8K ohm
R609, 610	22545472	4.7K ohm
R611, 612	22545332	3.3K ohm
R613, 614	22545104	100K ohm
R615, 616	22545333	33K ohm
R617, 618	22545100	10 ohm
R619, 620	22545104	100K ohm
R621, 622	22545104	100K ohm
R625, 626	22545222	2.2K ohm
R627, 628	22545392	3.9K ohm
R629, 630	22545123	12K ohm
R631, 632	22545821	820 ohm
R633, 634	22545101	100 ohm
R635, 636	22545103	10K ohm
R637, 638	22545563	56K ohm
R639, 640	22545222	2.2K ohm
R641	22545225	2.2M ohm
R642, 643	22658604	100K ohm Semi-fixed Variable
R644, 645	22584332	3.3K ohm
R648, 649	22545104	100K ohm
R650, 651	22545682	6.8K ohm
R652, 653	22545102	1K ohm
R654, 655	22545474	470K ohm
R656, 657	22545332	3.3K ohm
R658, 659	22545473	47K ohm
R660, 661	22545332	3.3K ohm
R662, 663	22545153	15K ohm
R664, 665	22545562	5.6K ohm
R666, 667	22545104	100K ohm
R668, 669	22545104	100K ohm
R670	22547331	330 ohm, 1/2W
R671	22545122	1.2K ohm

Symbol No.	Part No.	Description
R672	22545471	470 ohm
R673	22545104	100K ohm
R674	22545563	56K ohm
R675	22547471	470 ohm, 1/2W
R676	22547561	560 ohm, 1/2W
R677	22555569	5.6 ohm
R678	22545680	68 ohm
R679	22545153	15K ohm
R680	22545562	5.6K ohm
R681	22545153	15K ohm
R682	22545105	1M ohm
R683, 684	22658604	100K ohm Semi-fixed Variable
R685	22545100	10 ohm
R686	22545100	10 ohm
R687	22545103	10K ohm
R688	22545273	27K ohm
R689	22545683	68K ohm
R690	22545333	33K ohm
R691, 692	22545333	33K ohm
R693	22545333	33K ohm
R694	22547271	270 ohm, 1/2W
R695	22545104	100K ohm
R696, 697	22545333	33K ohm
R699	22545562	5.6K ohm

Symbol No.	Part No.	Description
R701, 702	22545821	820 ohm
R703, 704	22545470	470 ohm
R705	22545470	470 ohm
R706	22545103	10K ohm
R707	22545333	33K ohm
R708	22545683	68K ohm
R709, 710	22545223	22K ohm
R711, 712	22545563	56K ohm
⚠ R901	22570271	560 ohm, 1W, Metal Film
⚠ R902	22570269	390 ohm, 1W, Metal Film
R905, 906	22545561	560 ohm
R907, 908	22545561	560 ohm
⚠ R909	22500122	100 ohm, Fusible
R910	22545472	4.7K ohm
R950	22555681	680 ohm
ACCESSORIES		
AC01	22903689	Owner's Manual (TE)
AC01	22903602	Owner's Manual (TU)
AC02	20971653	Adaptor, Player
AC03	20971062	Driver (TE)
AC04	22124502	Antenna Feeder